2021537735

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

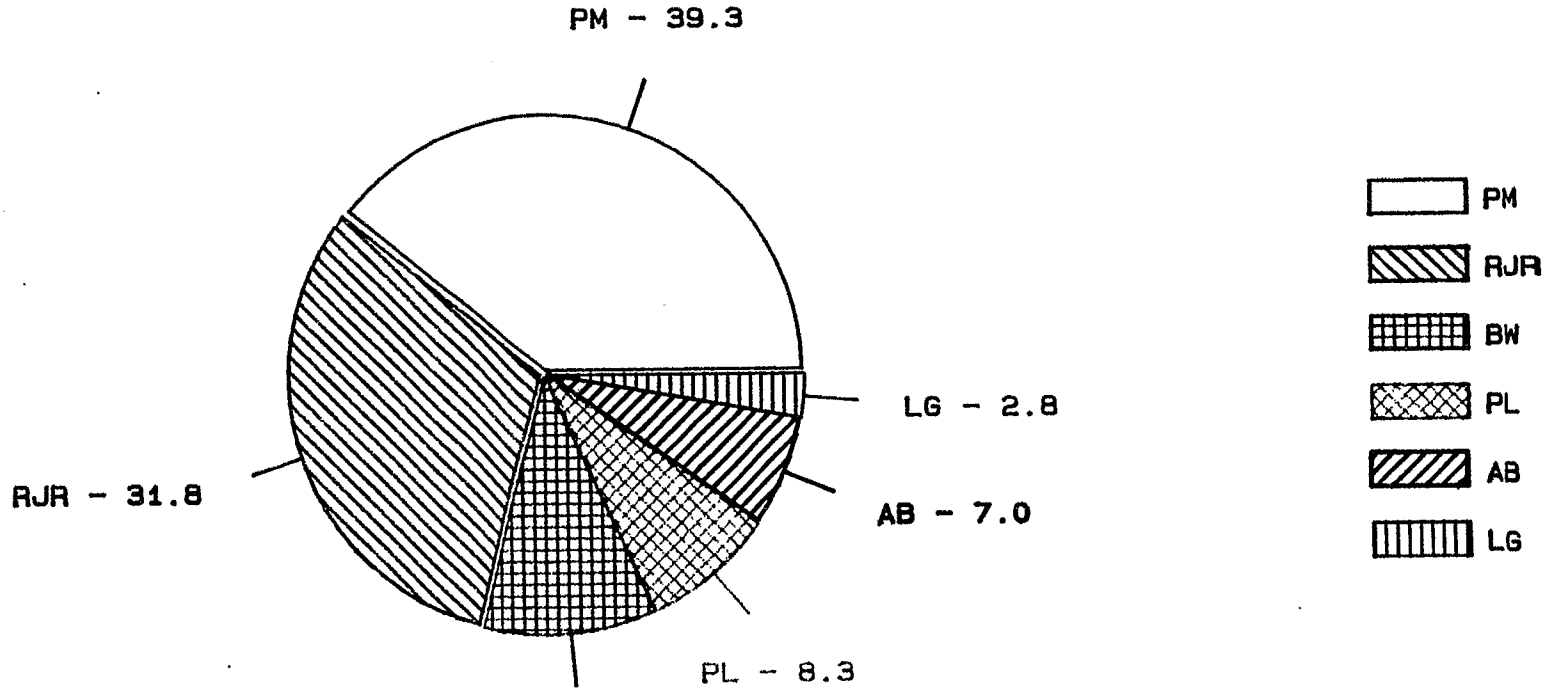
APPENDIX G

SEGMENTED CIGARETTE MARKET TRENDS

2021537736

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

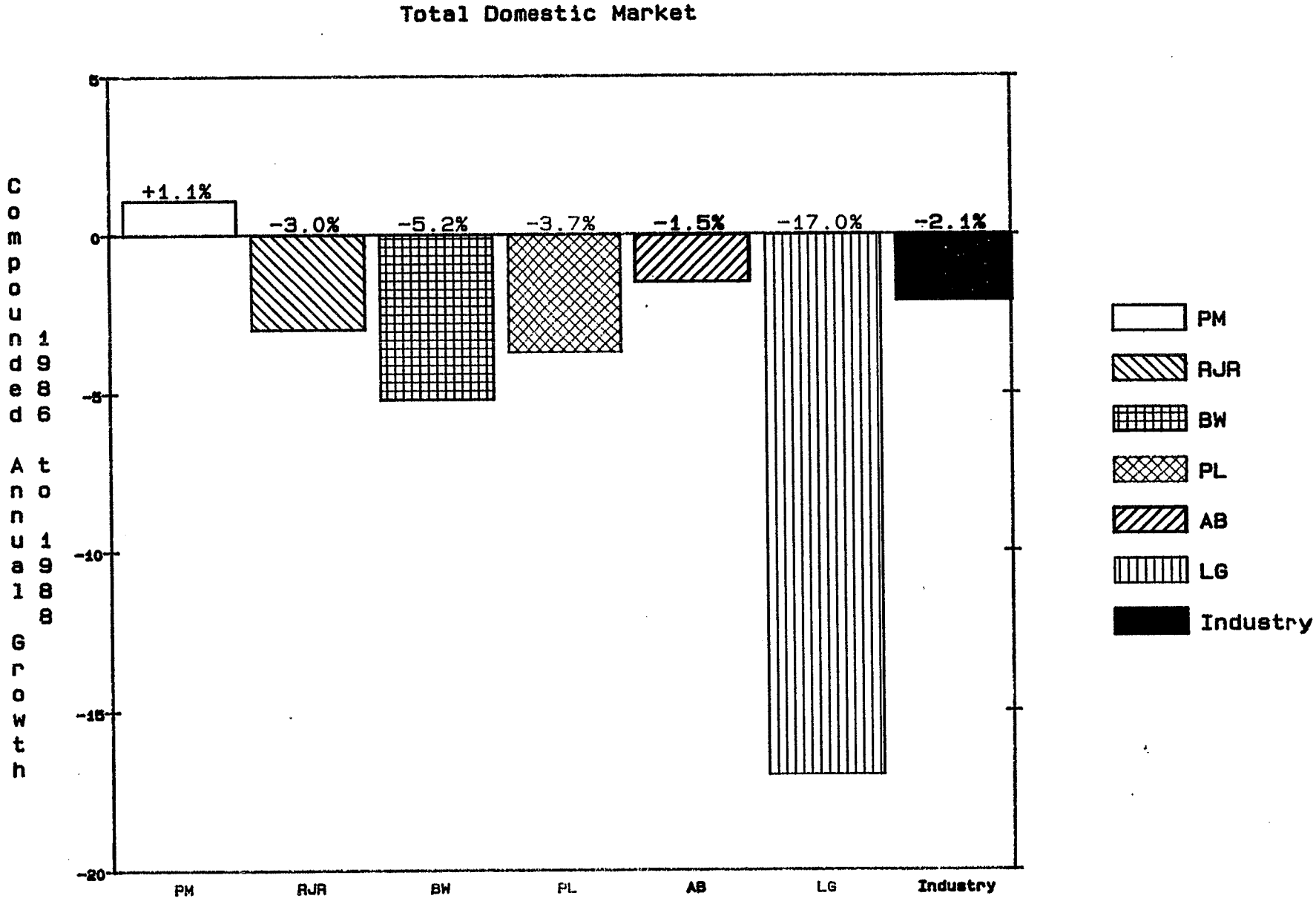
Total Domestic Market
1988 Market Share



1988 Market Share
Total Volume = 558.12 Billion Units

2021537737

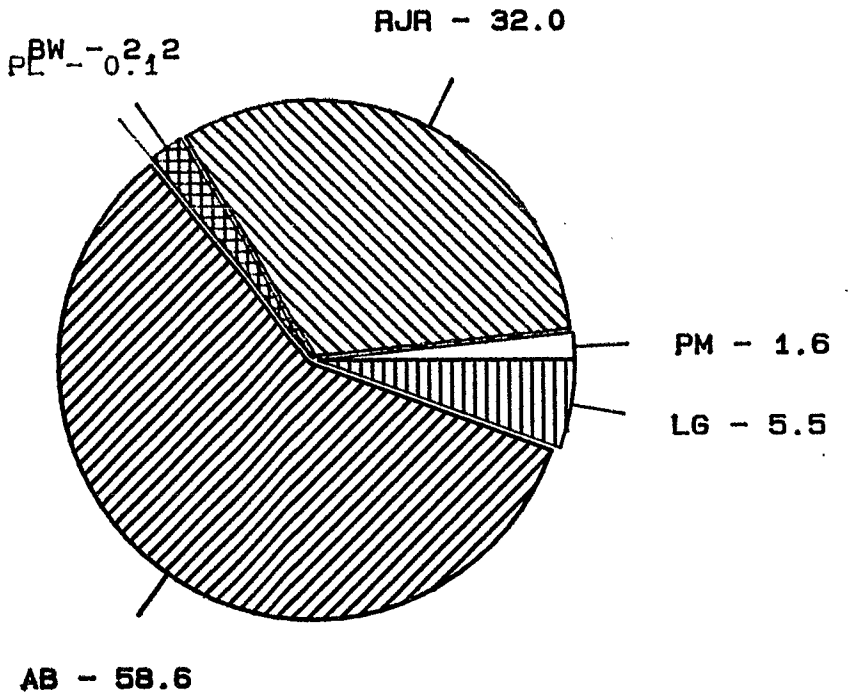
Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000



2021537738

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

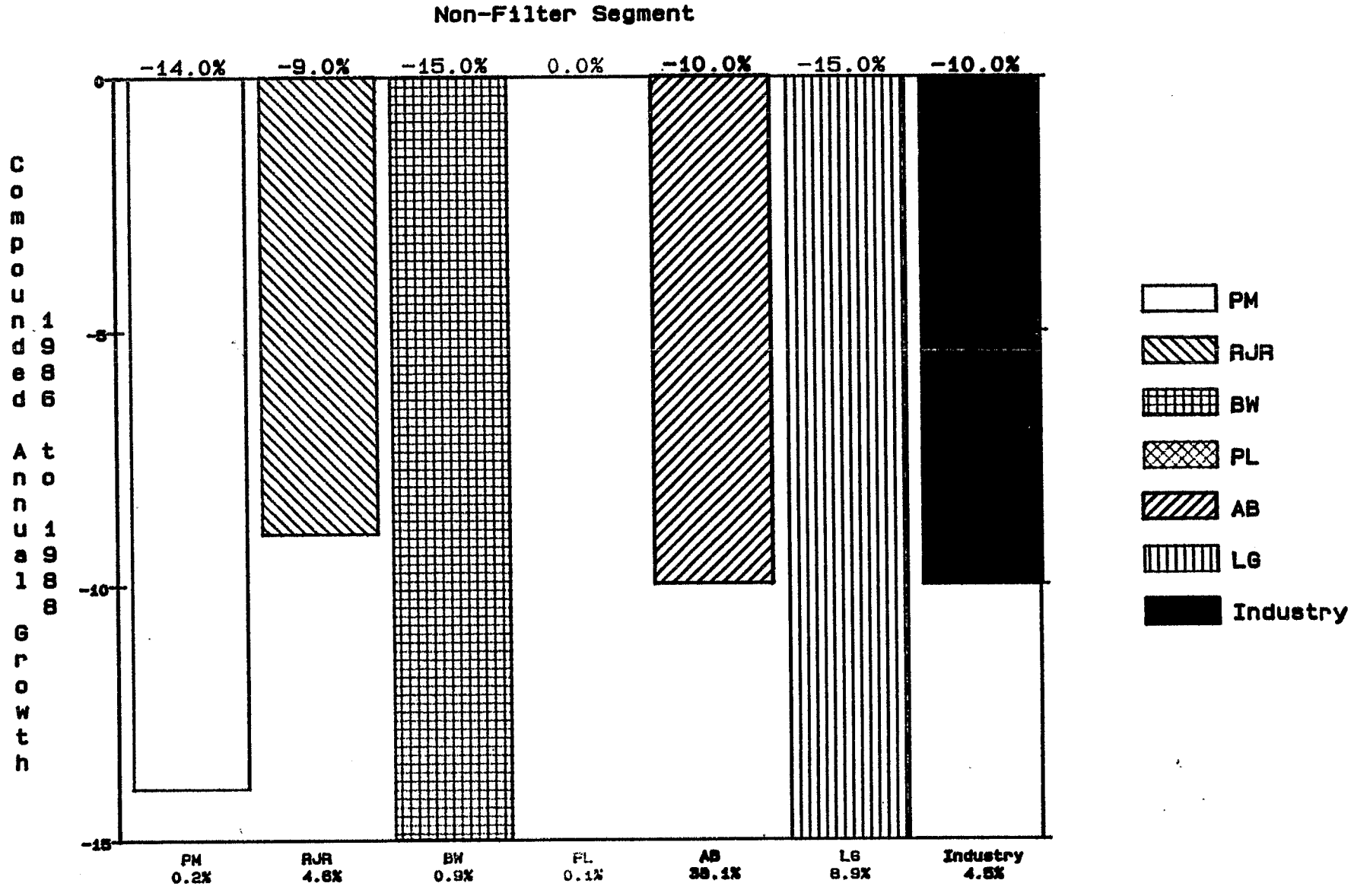
Non-Filter Segment
1988 Market Share



2021537739

1988 Market Share (4.5%)
Total Volume = 25.3 Billion Units

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

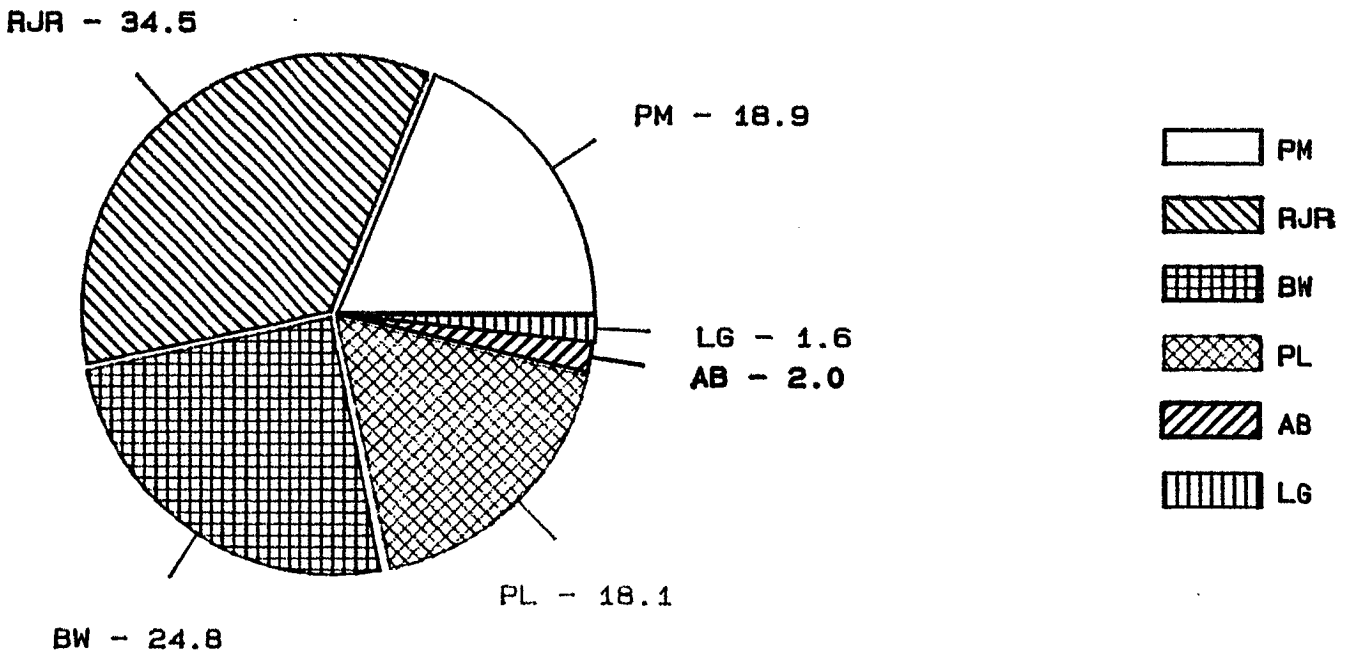


% = Segment Volume / Co Total Volume

2021537740

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Menthol Segment
1988 Market Share

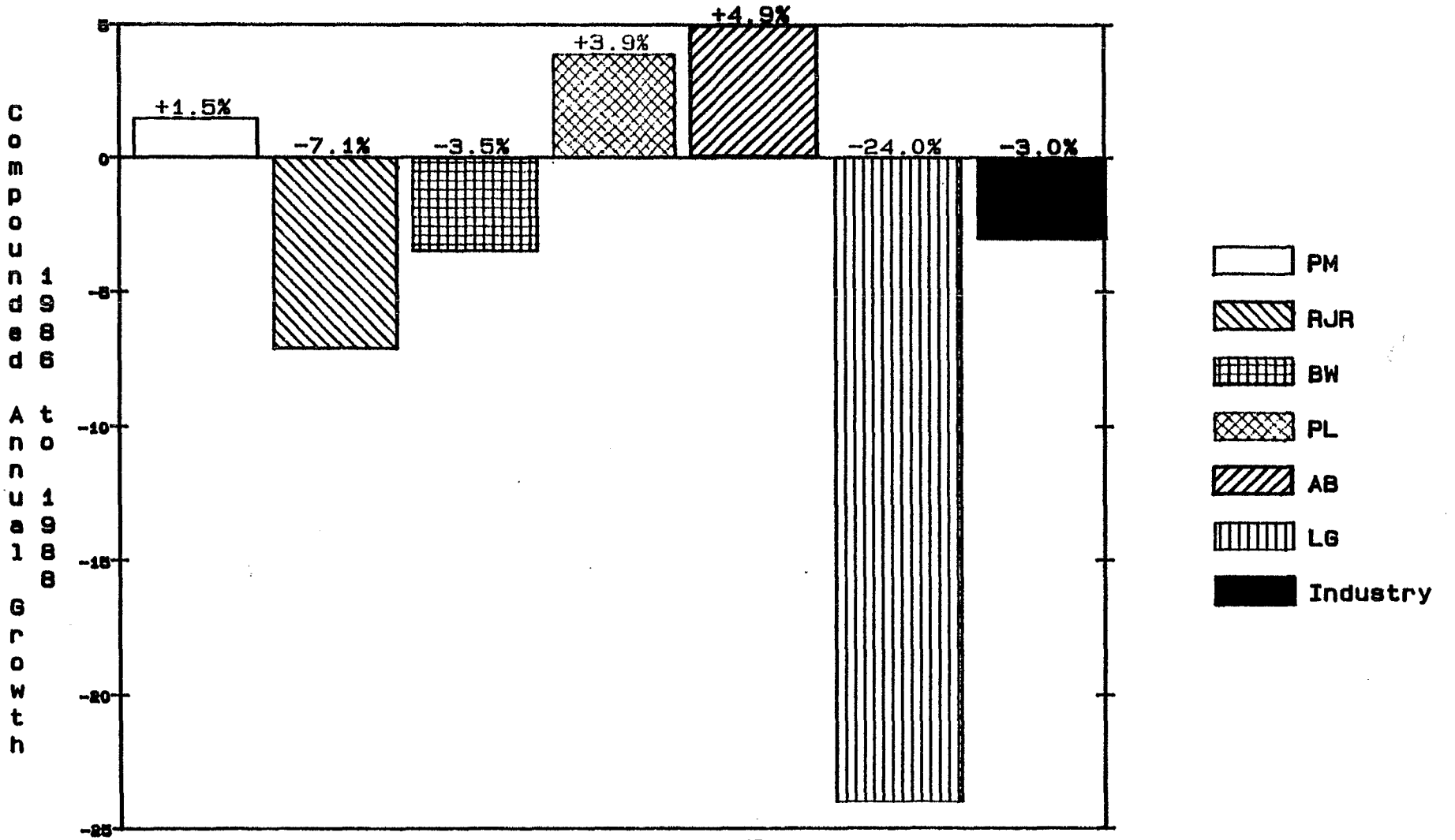


2021537741

1988 Market Share (26.9%)
Total Volume = 150.4 Billion Units

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Menthol Segment

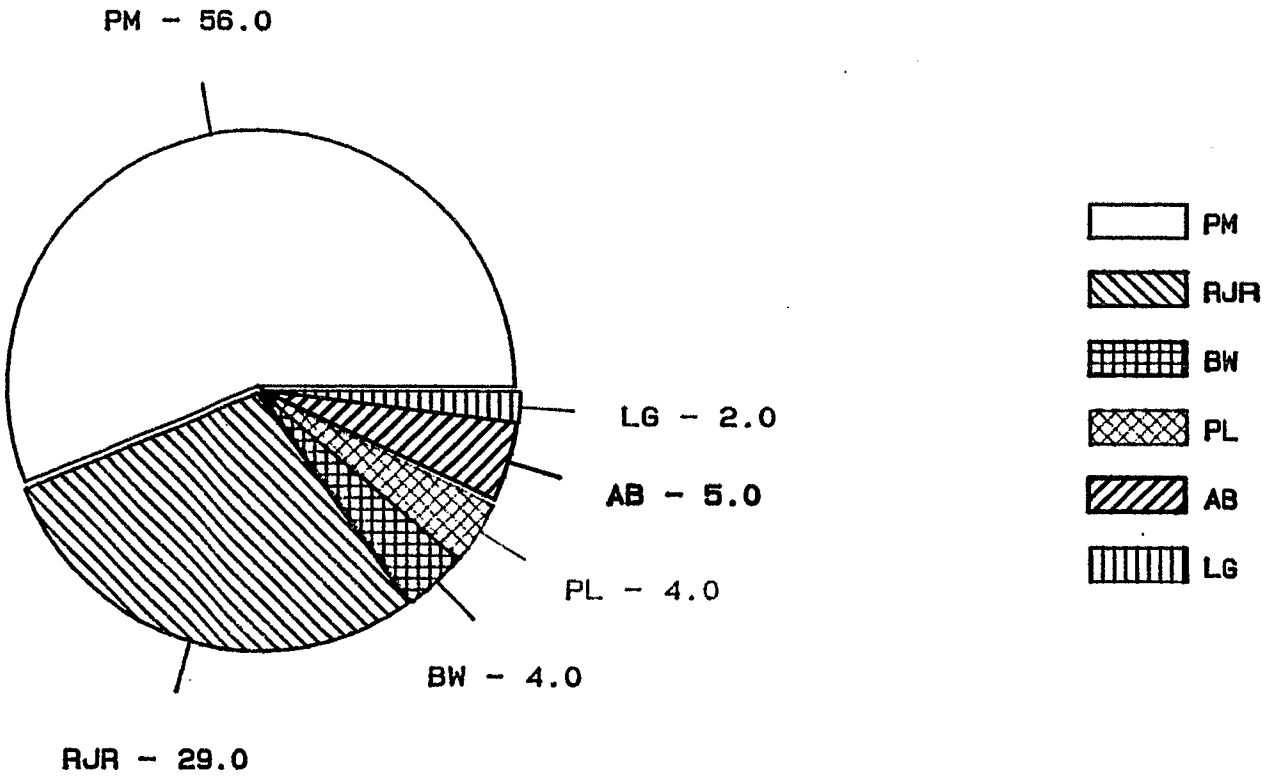


20215377A2

% = Segment Volume / Co Total Volume

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Full Flavored Filter Segment
1988 Market Share

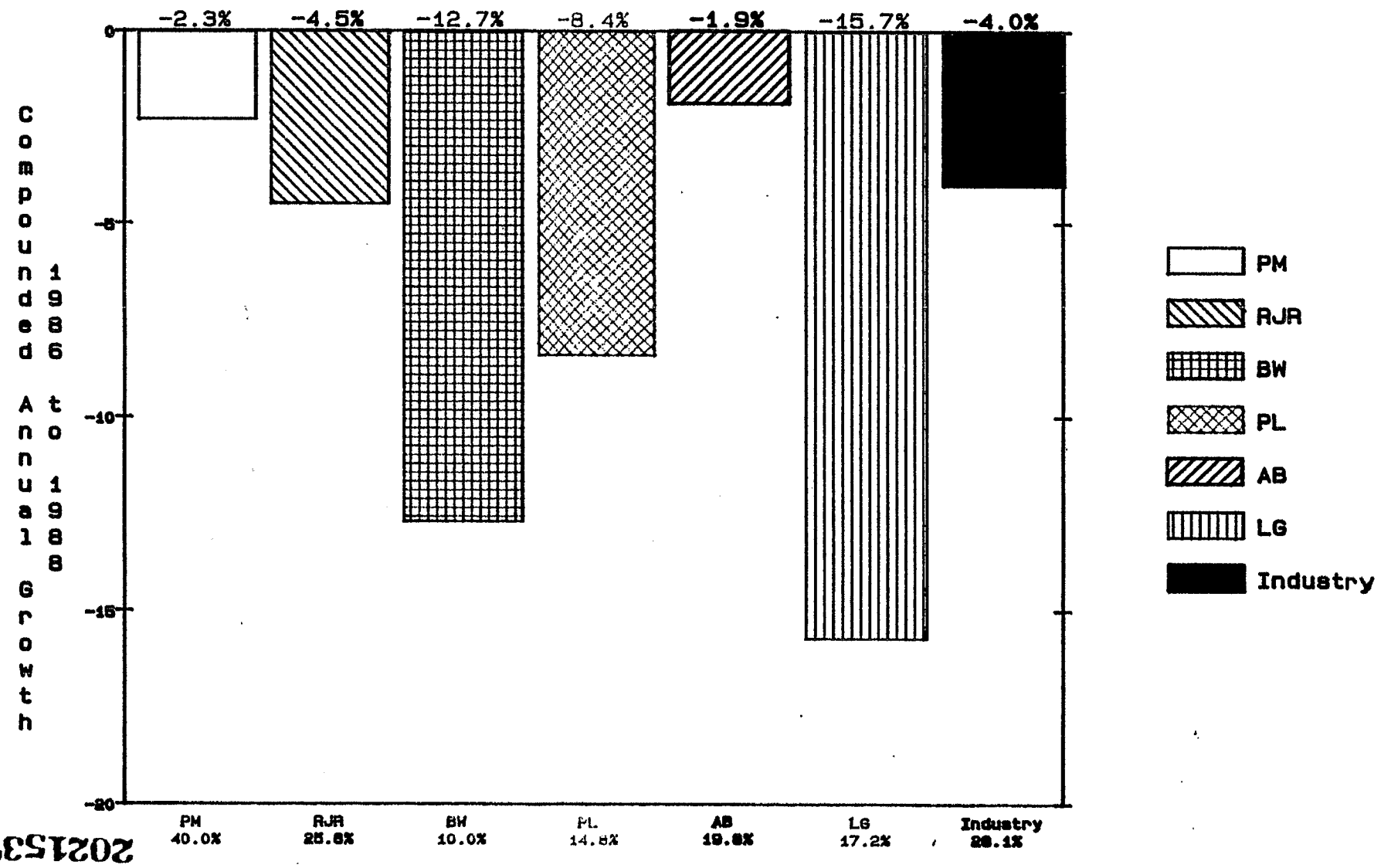


2021537743

1988 Market Share (28.1%)
Total Volume - 156.8 Billion Units

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Full Flavored Filter Segment

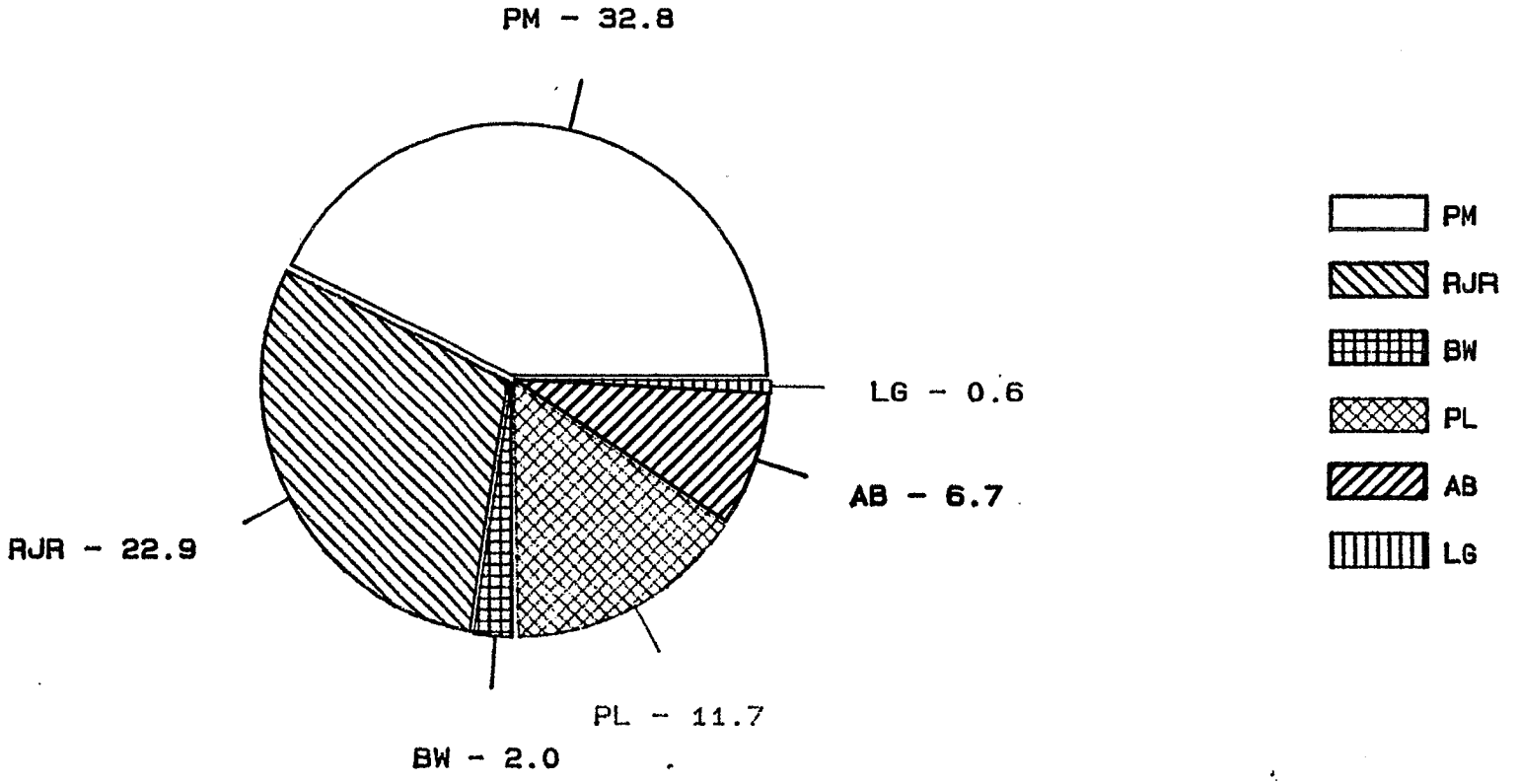


% = Segment Volume / Co Total Volume

2021537744

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Light Filter Segment
1988 Market Share

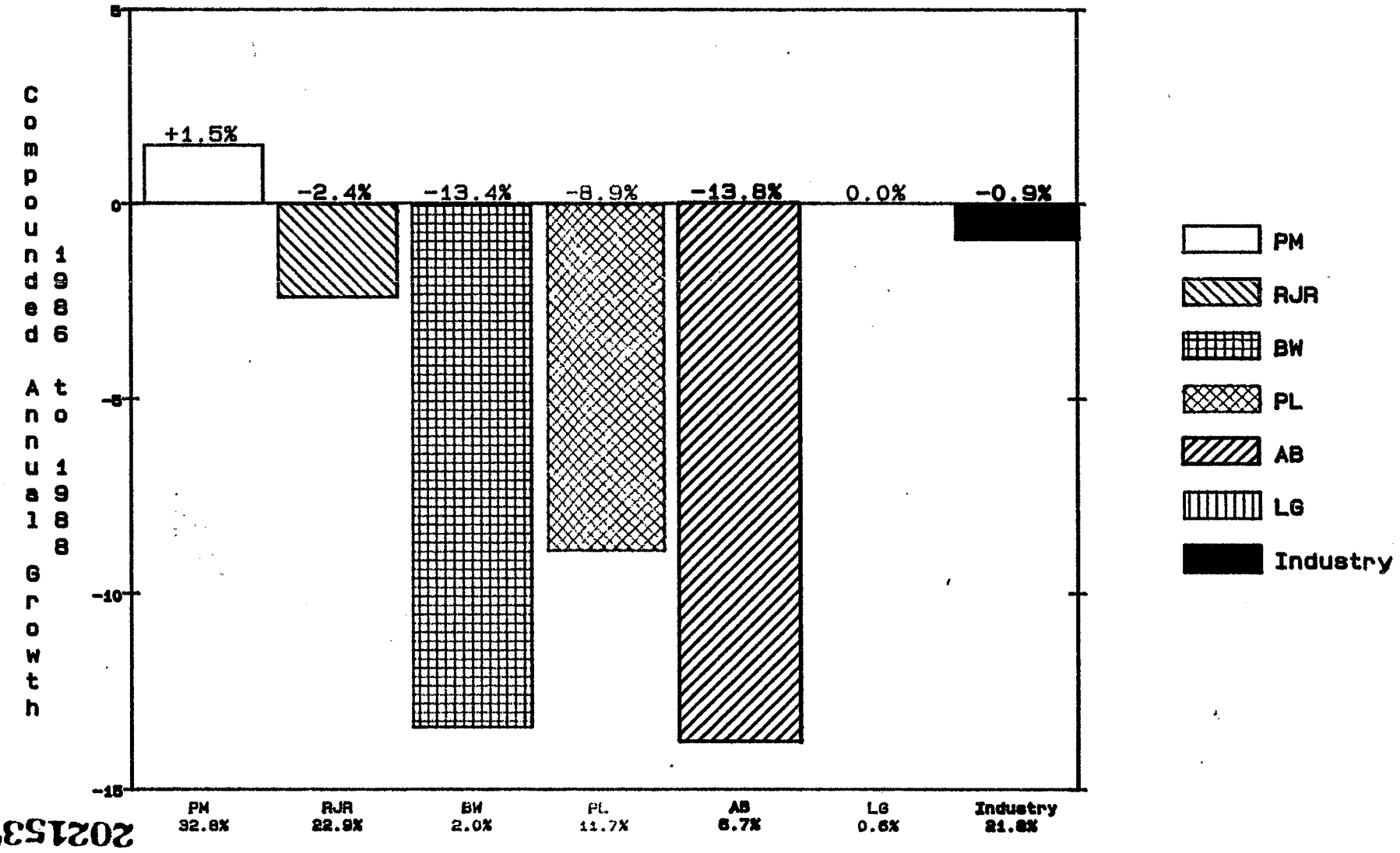


2021537745

1988 Market Share (21.8%)
Total Volume = 121.9 Billion Units

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Light Filter Segment

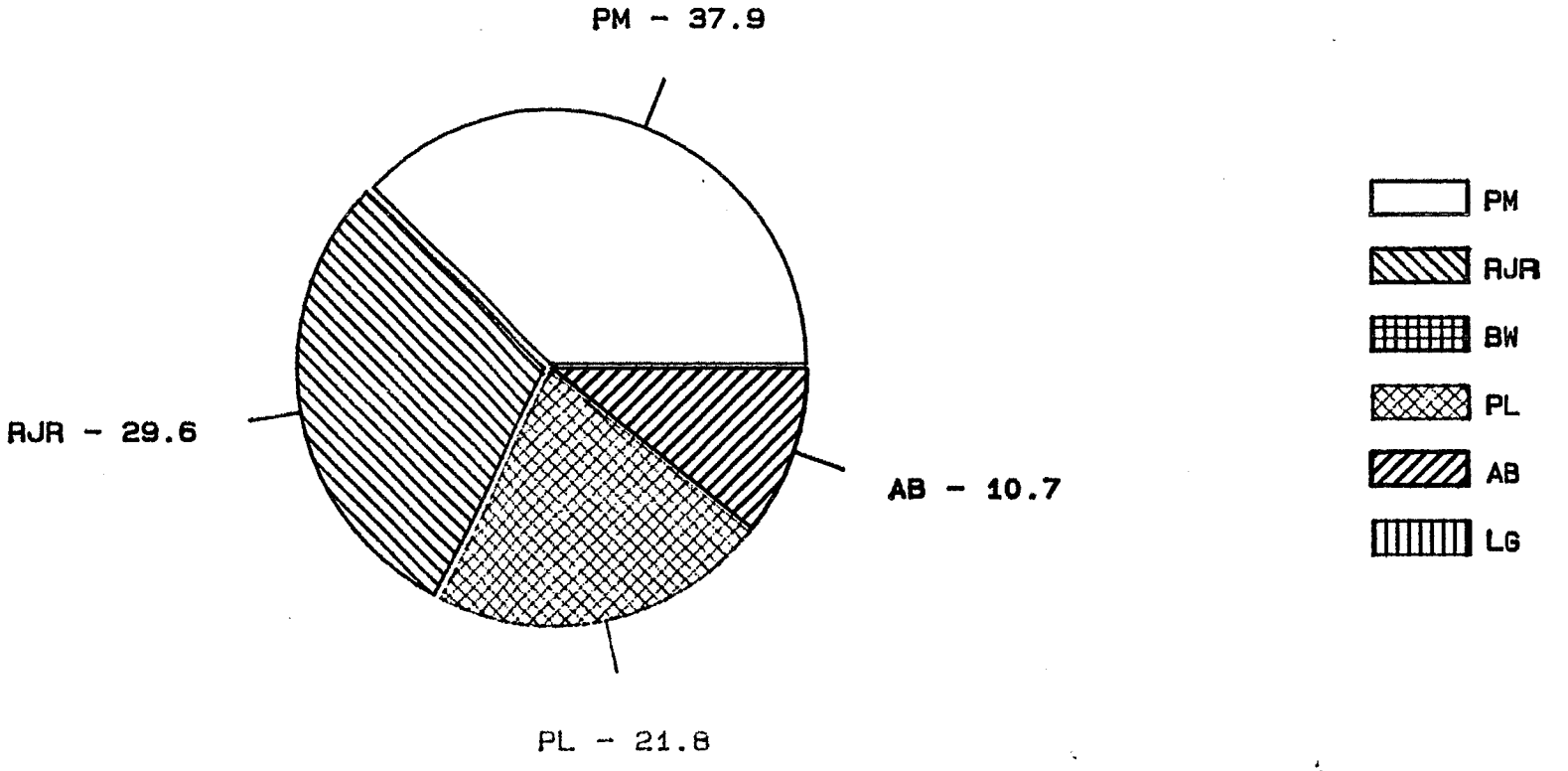


% = Segment Volume / Co Total Volume

2021537746

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Ultra Lights Filter Segment
1988 Market Share

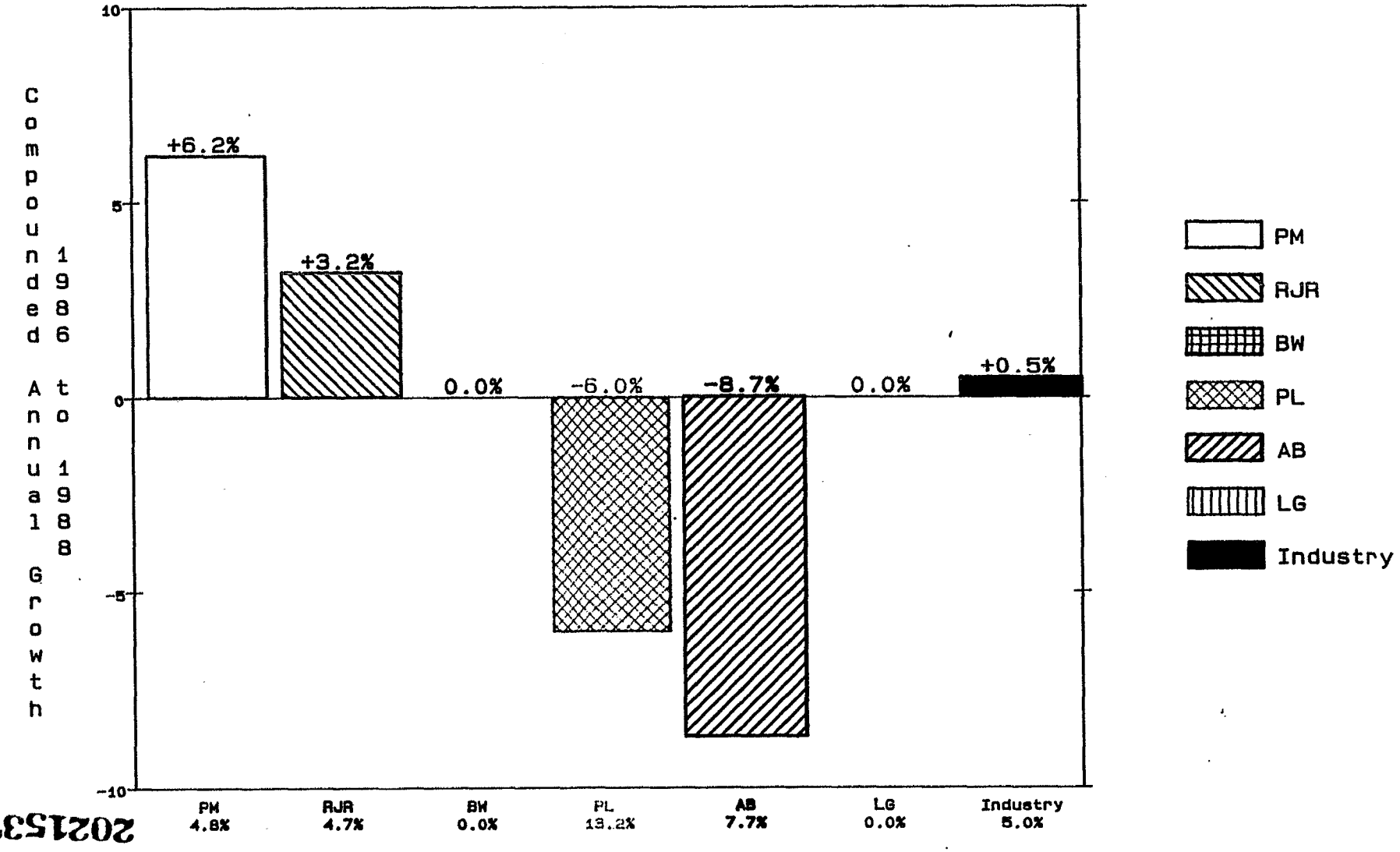


2021537747

1988 Market Share (5.0%)
Total Volume = 28.0 Billion Units

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Ultra Lights Filter Segment

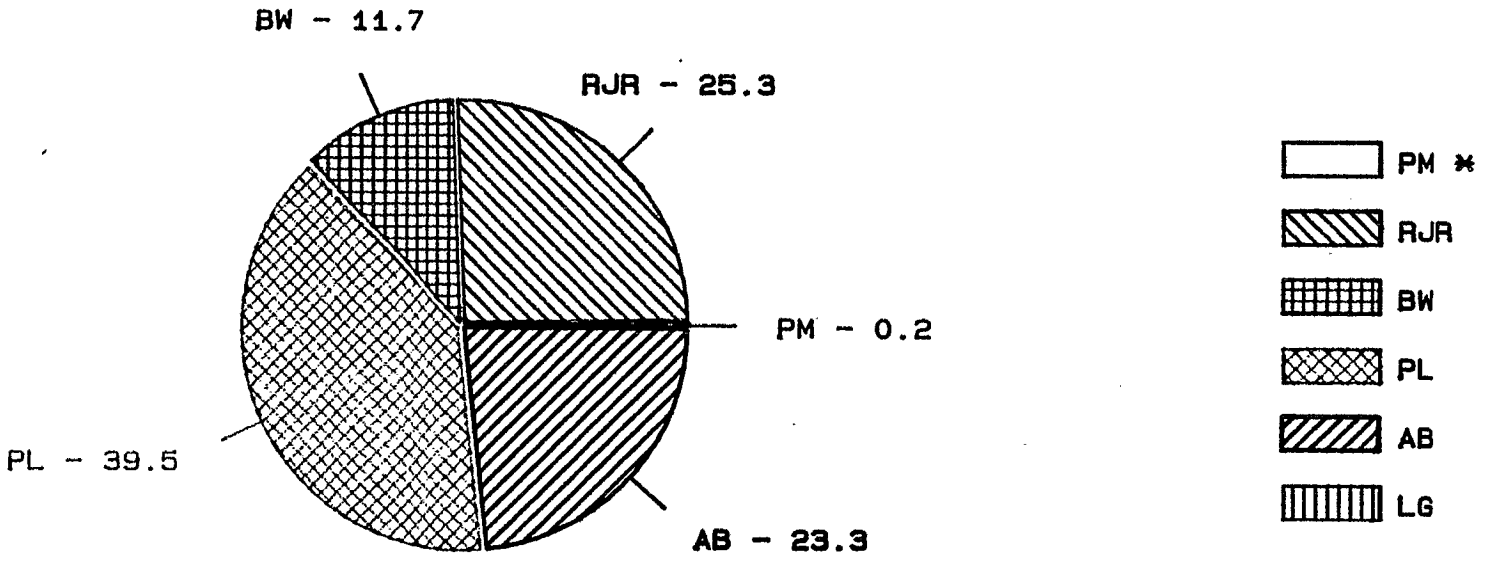


2021537748

% = Segment Volume / Co Total Volume

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Ultra Low Tar Filter Segment
1988 Market Share



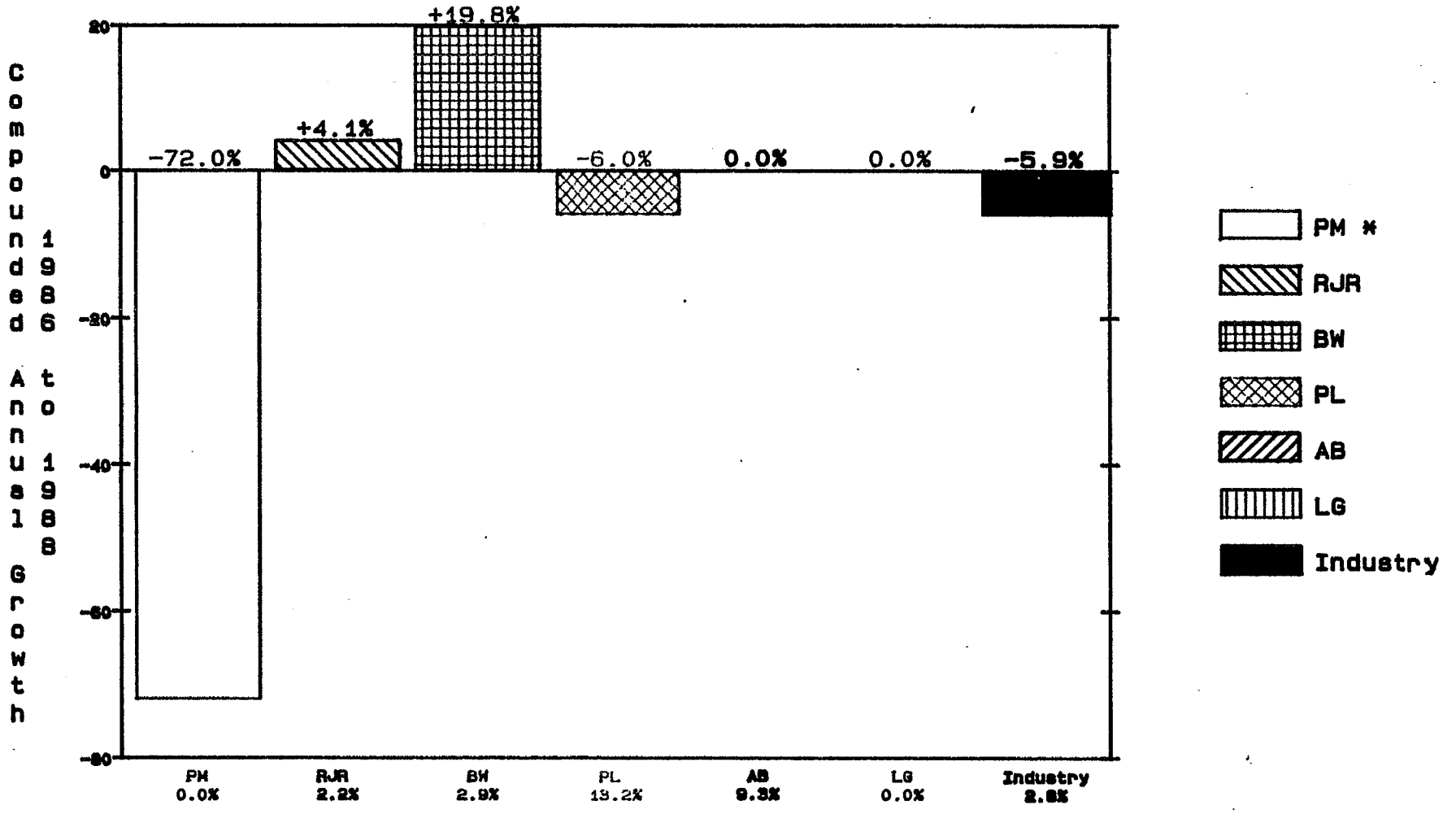
1988 Market Share (2.8%)
Total Volume = 15.4 Billion Units

* Cambridge < 0.5 discontinued

2021537749

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Ultra Low Tar Filter Segment



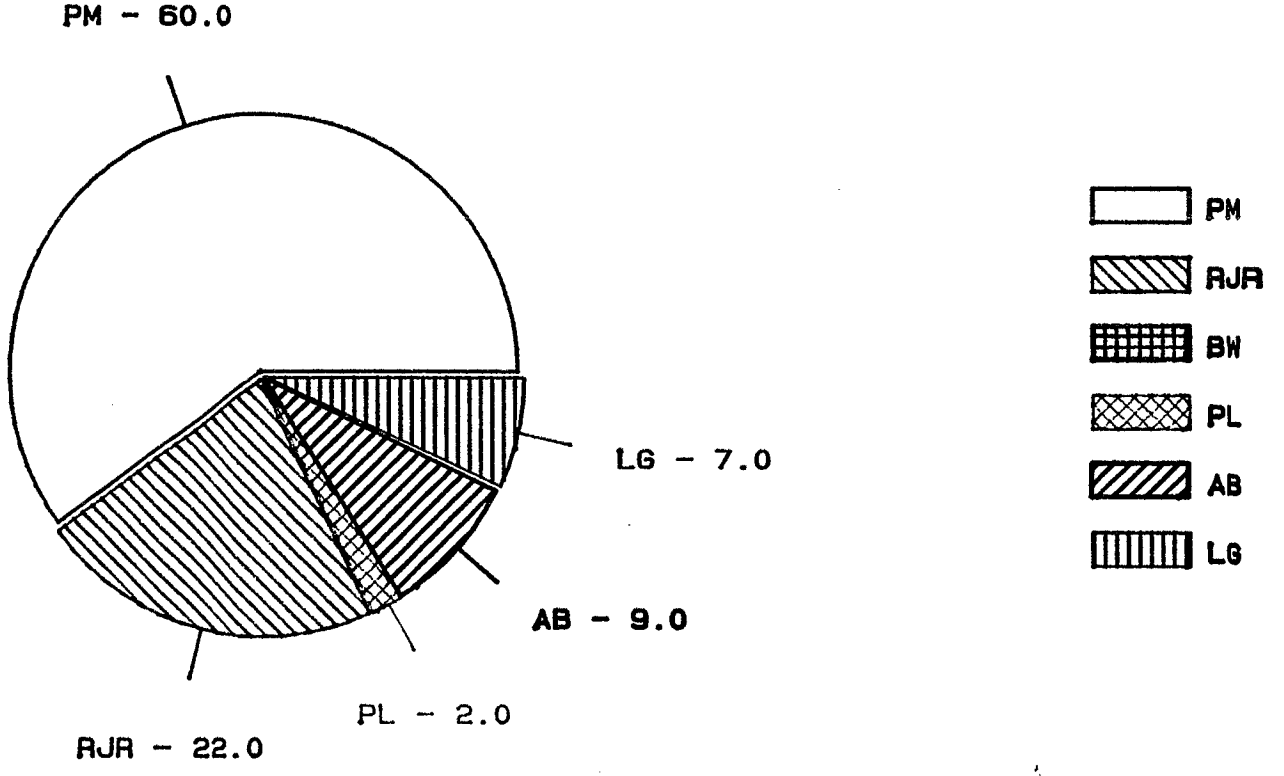
% = Segment Volume / Co Total Volume

* Cambridge < 0.5 discontinued

2021537750

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Slims / 120's Segment
1988 Market Share

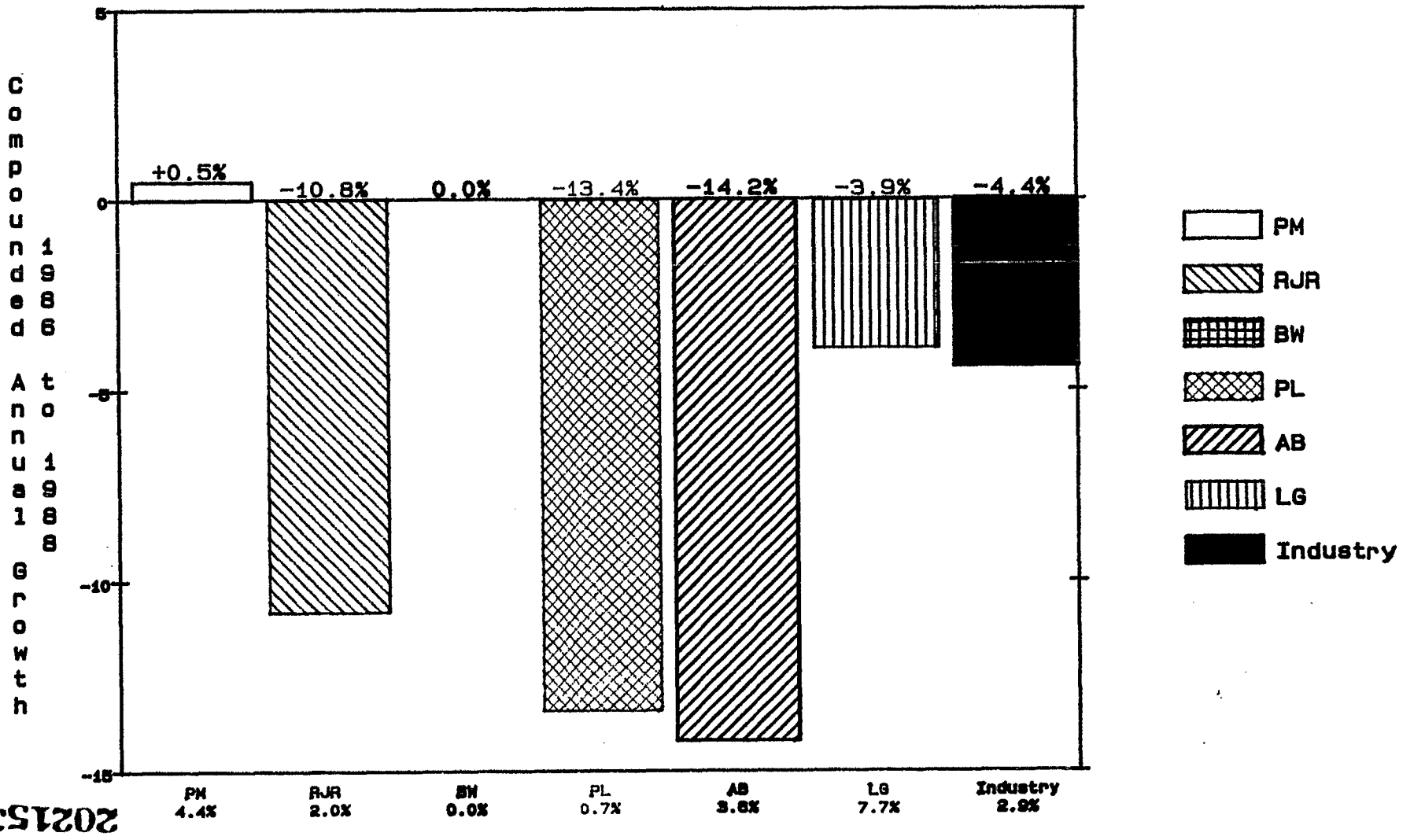


2021537751

1988 Market Share (2.9%)
Total Volume = 16.1 Billion Units

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Slims / 120's Segment
1988 Market Share

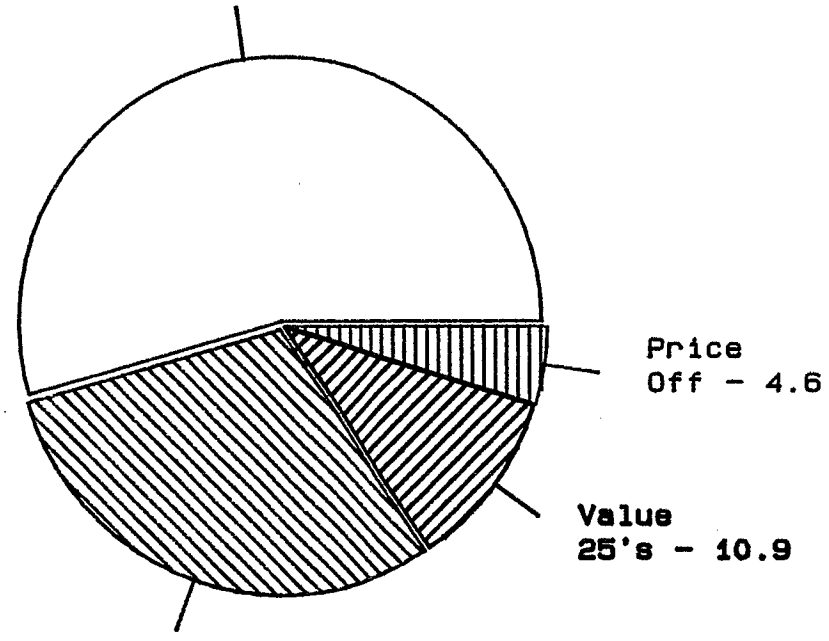


2021537752

% = Segment Volume / Co Total Volume

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Price / Value by Type

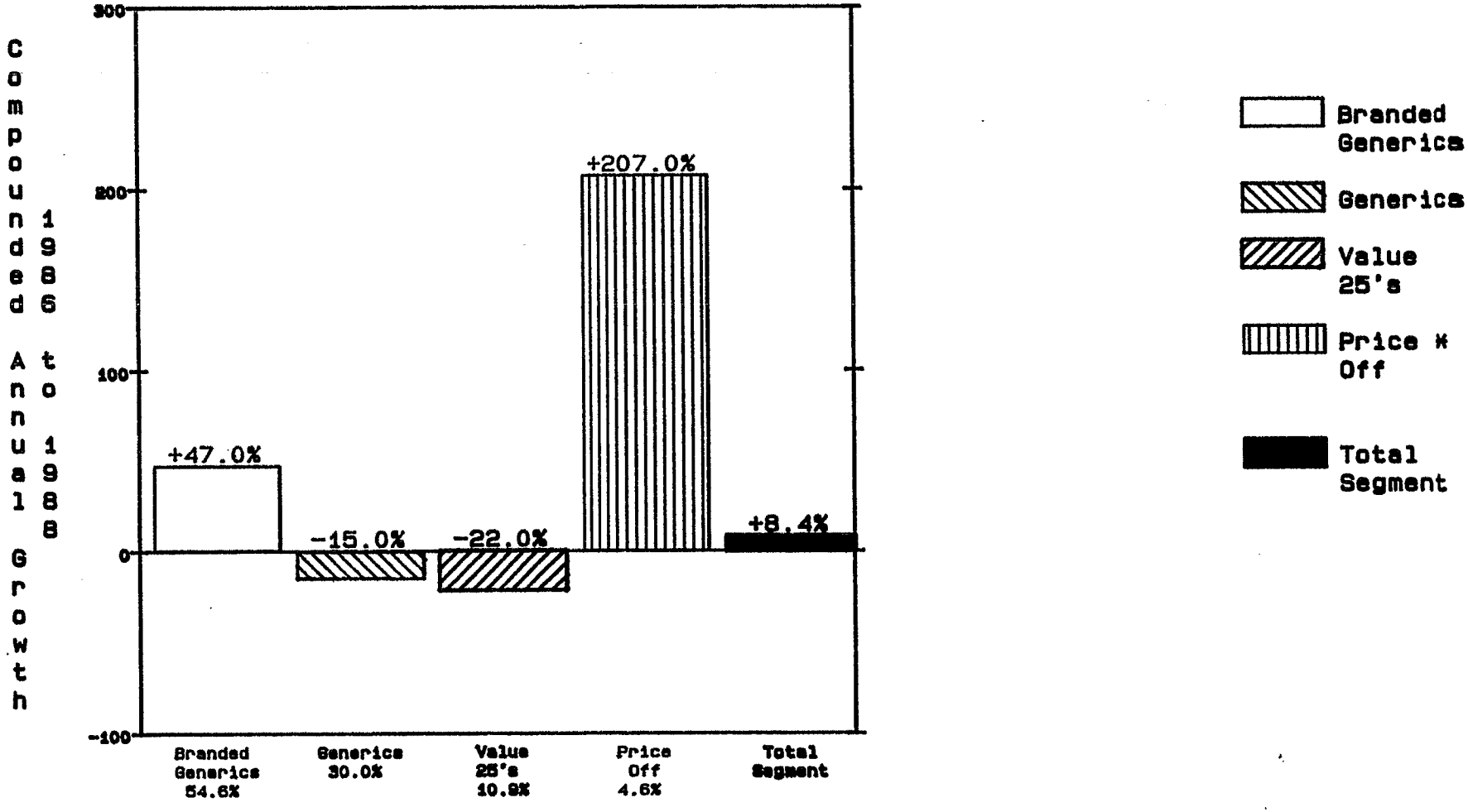


2021537753

1988 Market Share (11.0%)
Total Volume = 61.4 Billion Units

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Price / Value by Type



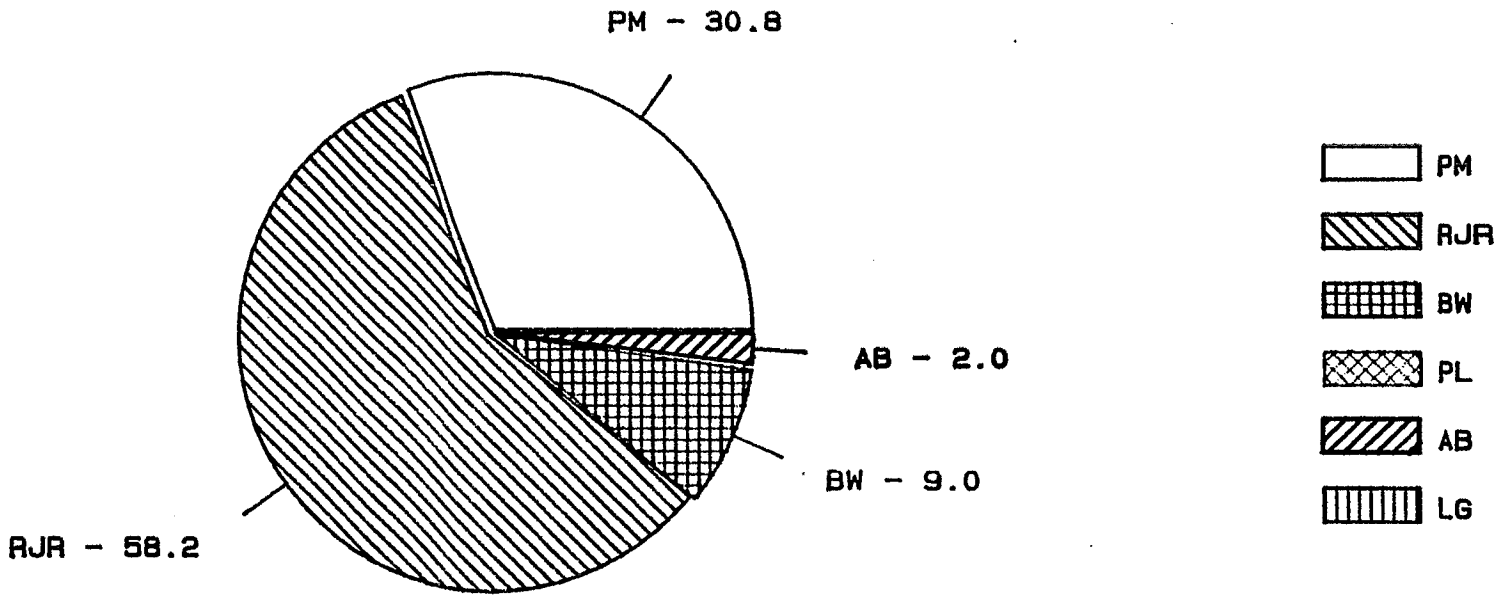
% = Segment Volume / Co Total Volume

* Figure For 1 Year Only

2021537754

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Branded Generics
1988 Market Share

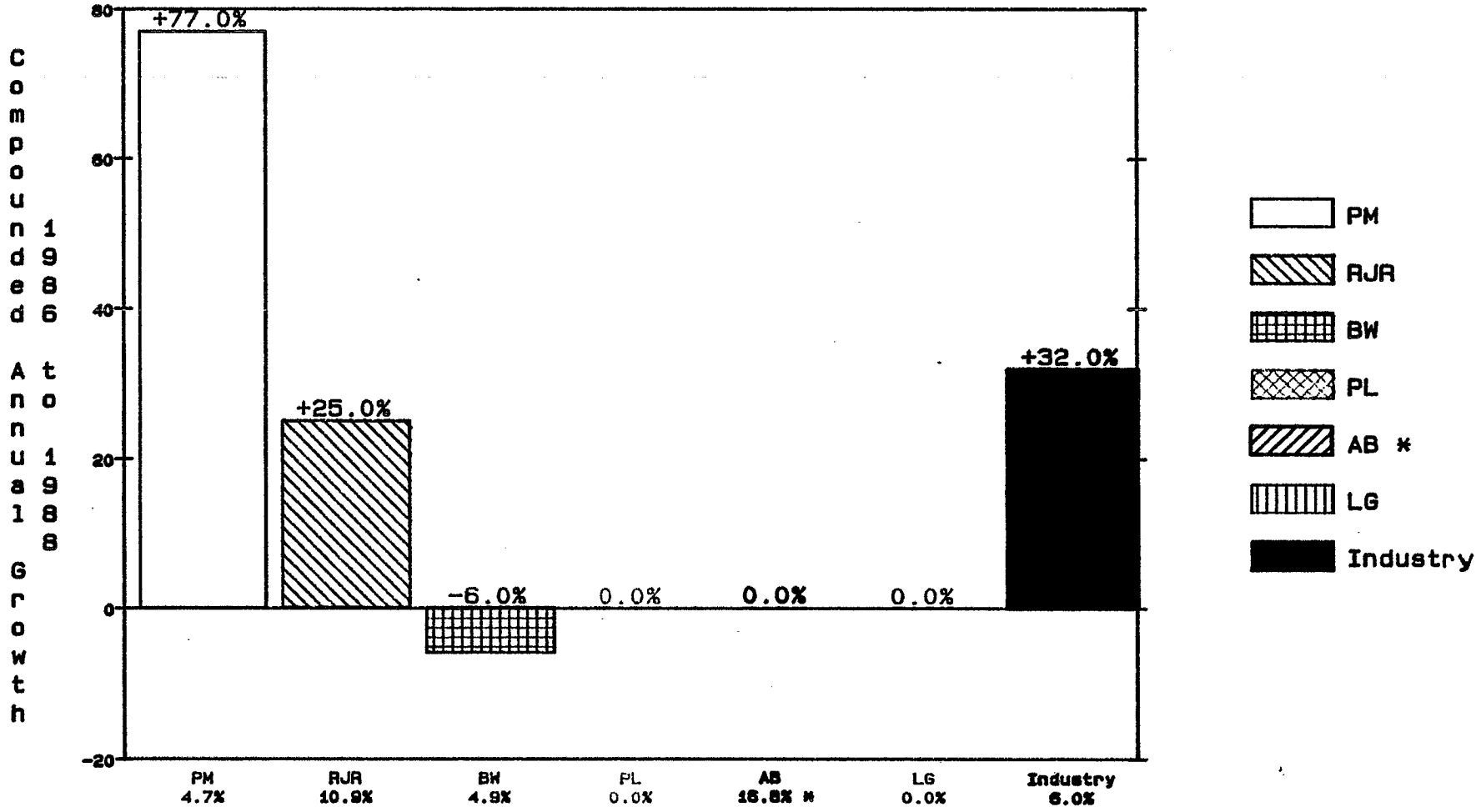


1988 Market Share (6.0%)
Total Volume = 33.2 Billion Units

2021537755

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Branded Generics



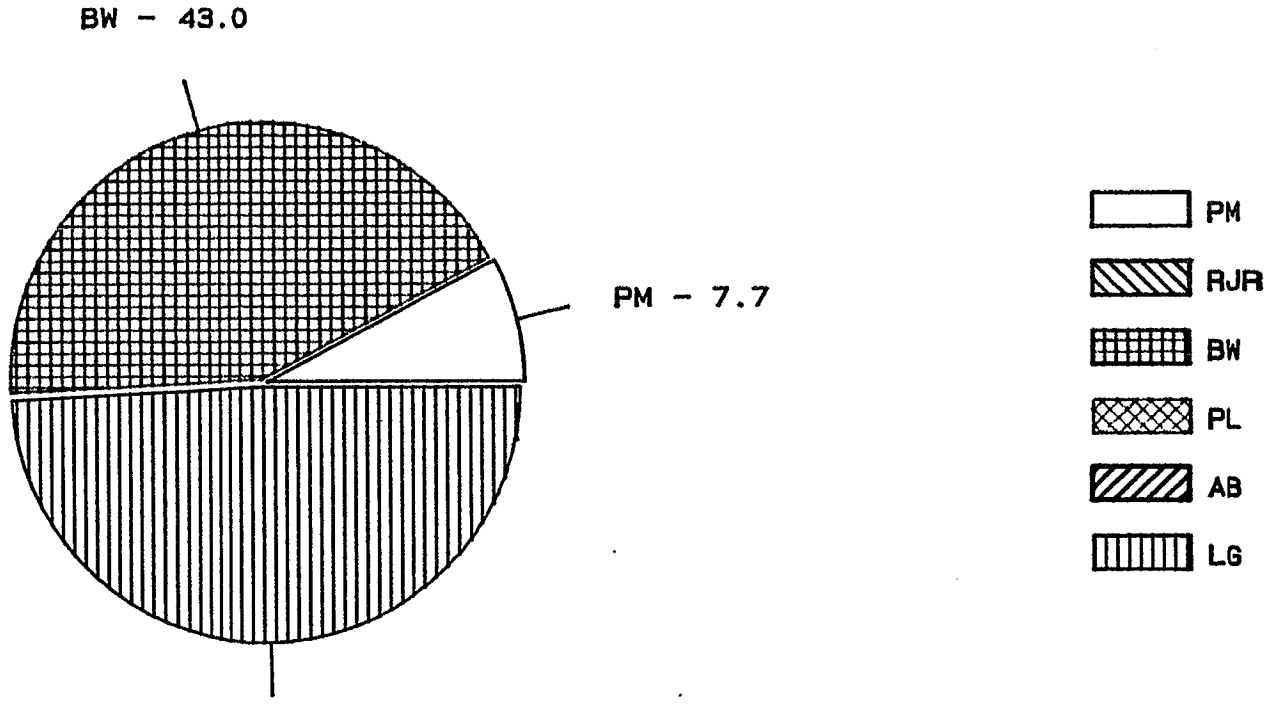
% = Segment Volume / Co Total Volume

* American Lights Introduced in 1988

2021537756

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Generic Segment
1988 Market Share

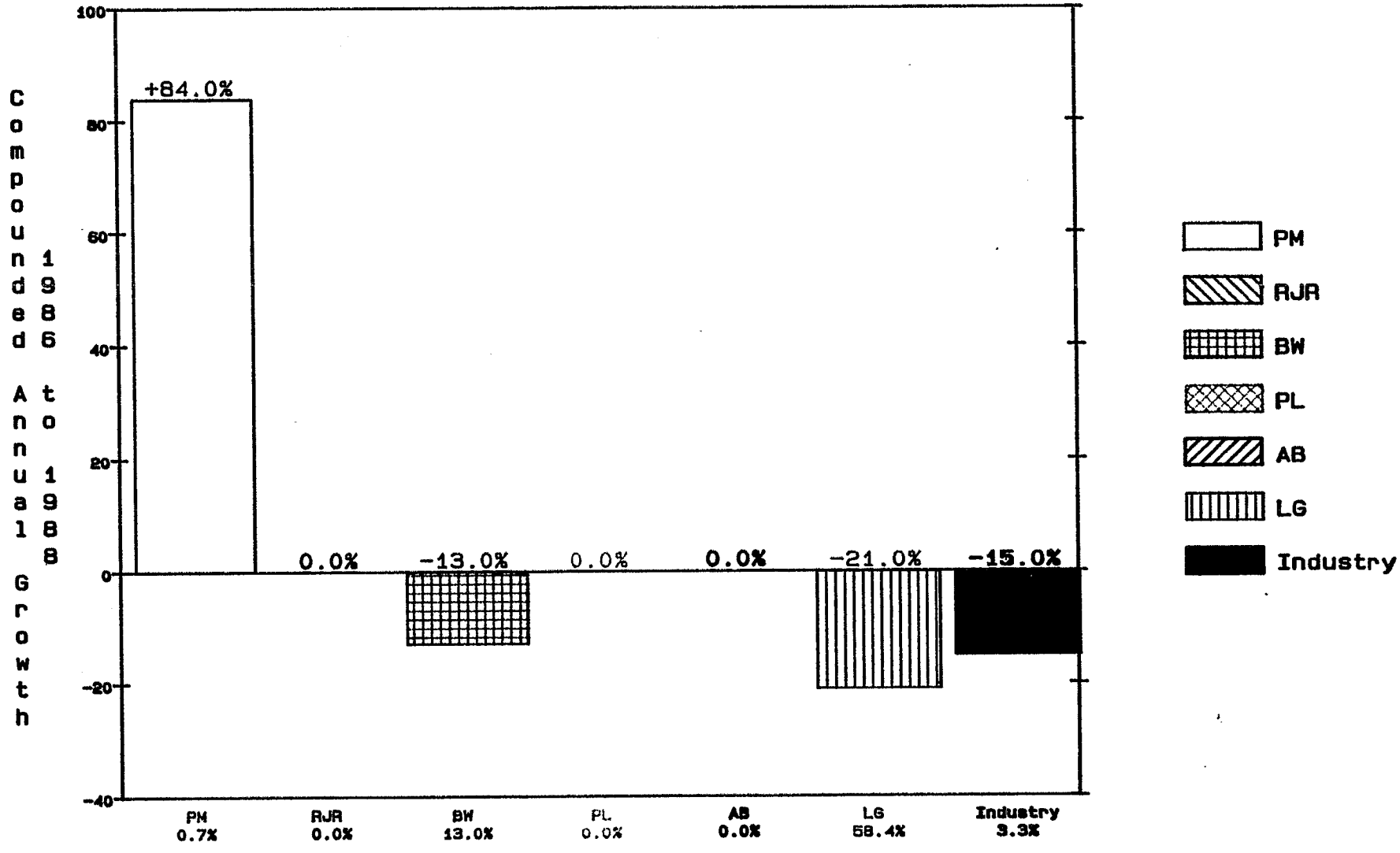


1988 Market Share (3.3%)
Total Volume = 18.5 Billion Units

2021537757

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Generic Segment

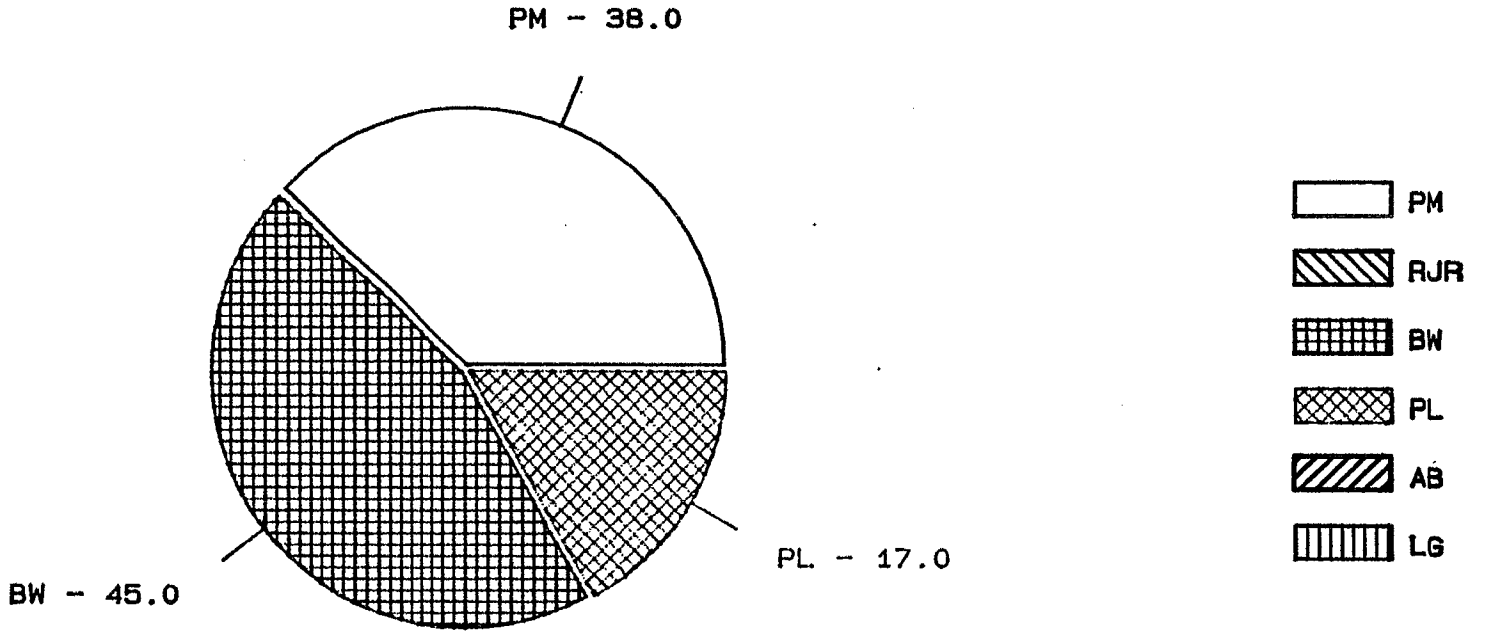


% = Segment Volume / Co Total Volume

2021537758

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

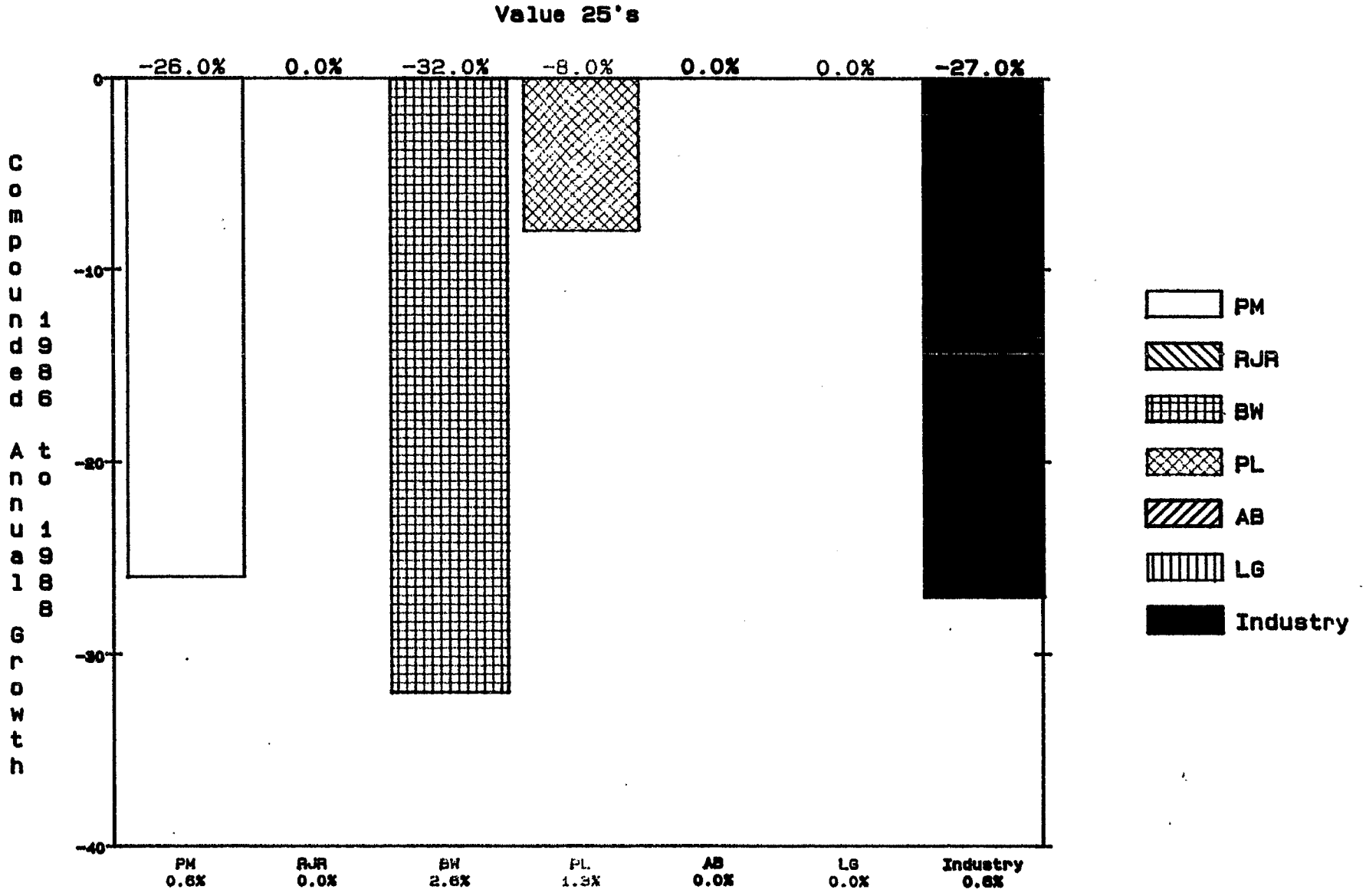
Value 25's
1988 Market Share



1988 Market Share (0.6%)
Total Volume = 3.6 Billion Units

2021537759

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

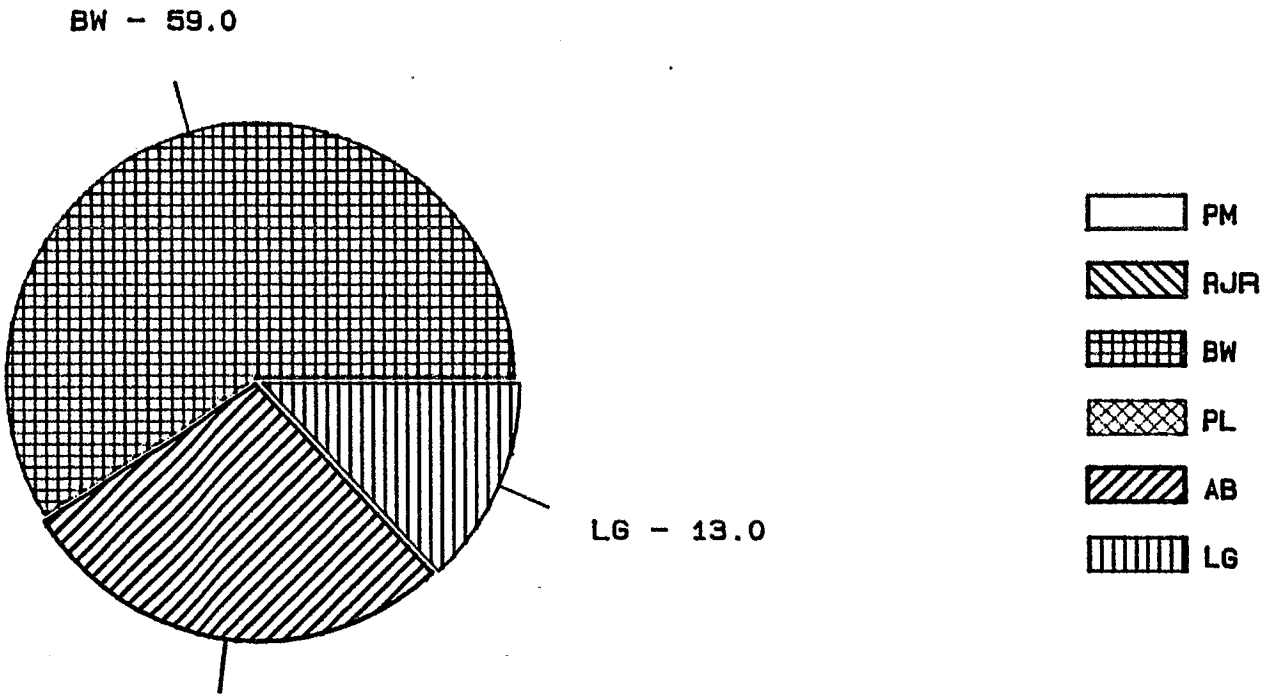


% = Segment Volume / Co Total Volume

2021537760

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Price - Off (Coupon)
1988 Market Share

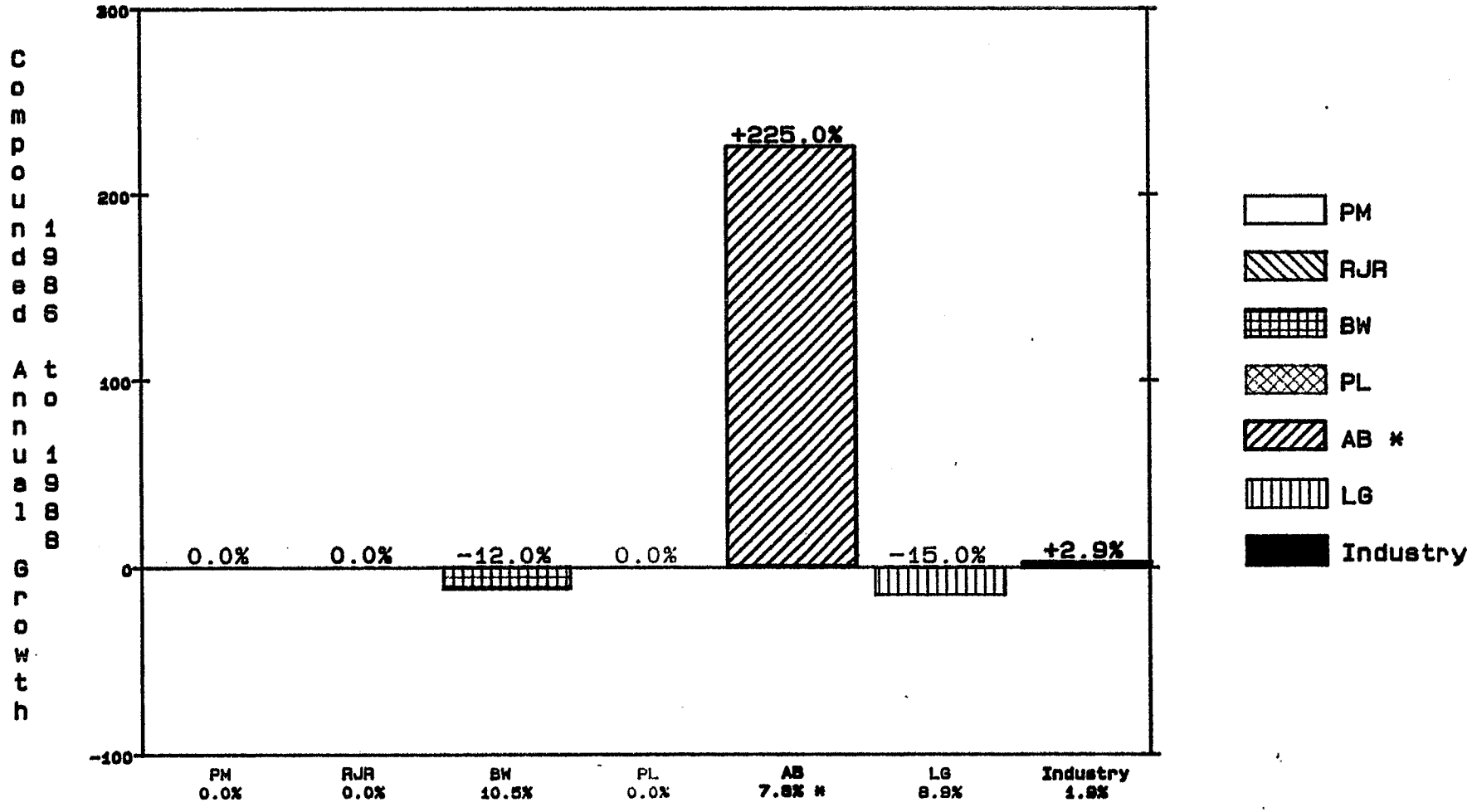


2021537761

1988 Market Share (1.9%)
Total Volume = 10.9 Billion Units

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Price - Off (Coupon)



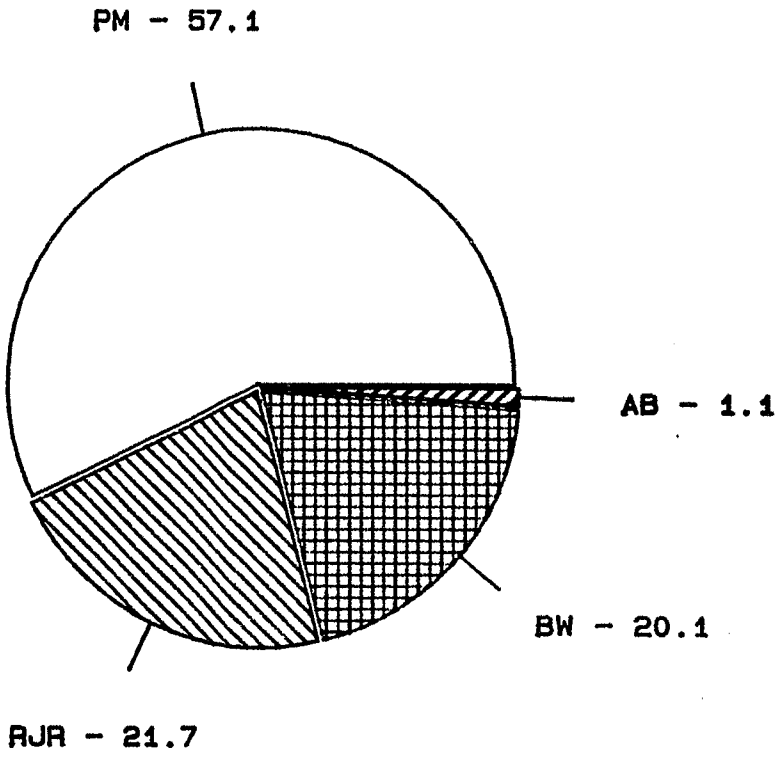
% = Segment Volume / Co Total Volume

* Malibu (Price-Off) Introduced in 1987

2021537762

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

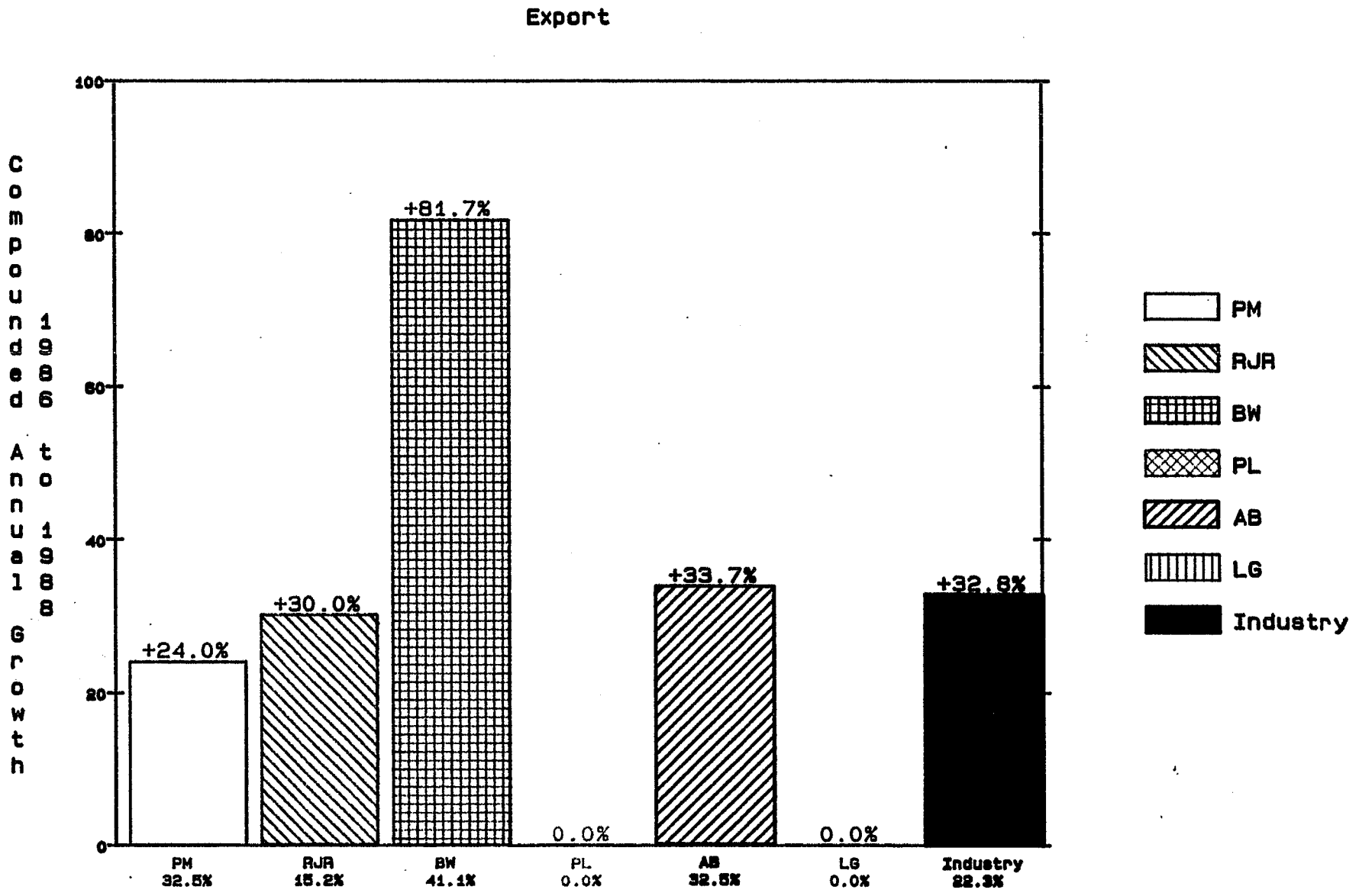
Export
1988 Market Share



1988 Export / Domestic (22.3%)
Total Volume - 124.69 Billion Units

2021537763

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000



% = Segment Volume / Co Total Volume

2021537764

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

2021537765

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

APPENDIX H

ENVIRONMENTAL ISSUES

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

MAJOR PM ENVIRONMENTAL PROJECTS

Current and Upcoming

Park 500 Wastewater Plant upgrade for increased capacity and phosphorous removal.

Upgrade of air pollution control equipment and replacement of printing press at Colonial Heights Packaging.

Installation of scrubbers at MC and Stockton Street to reduce the emission of volatile organic compounds (VOC).

Removal of oil tanks and contaminated soil at Stockton Street.

Removal of oil contaminated soil (and tank) at Louisville.

Stack testing at all facilities to determine the emissions of VOC and toxic substances.

Wastewater testing at Richmond facilities to characterize production discharges.

Solid waste inventory and waste minimization initiative.

Waste oil collection for boiler fuel.

Underground tank upgrade for Colonial Heights Packaging.

DuPont's contamination of groundwater in vicinity of Operations Center.

Spectron Superfund site.

Smith's Farm Superfund site.

Trade secret project for Material Safety Data Sheets and governmental reporting.

Development of mainframe Environmental Release and Chemical Inventory System.

10/05/89

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

ENVIRONMENTAL ISSUES & TRENDS

AREA	ISSUES	TRENDS
General	Waste Management Source Reduction Pollution Prevention Waste Minimization	Increased Costs Additional Controls Longer Lead Time For Permits Additional Sources Regulated Increased Public Scrutiny More Laws and Regulations
Water	Nutrients (Nitrogen, Phosphorus) Groundwater Underground Tanks Storm Water - Combined Sewer Overflows	Upgrade Park 500 Wastewater Plant More Sludge To Dispose Of More Thorough Investigations Of Property Purchases Replace All Old Underground Tanks Increased Water Bills
Air	Ozone (Non-Attainment) VOCs Air Toxics Acid Rain Greenhouse Effect	More Restrictive Permits More Controls To Reduce VOCs More Testing, More Restrictions Longer Time To Get Permits More Controls On Boilers
Solid Waste	Landfills Sludge Disposal Recycling Packaging Special Wastes	Fewer Landfills, Increased Costs Increased Sludge Disposal Cost Mandated Recycling Material Restrictions & Deposits New Rules For Infectious & Medical Wastes More Difficult & Costly For Contaminated Soil Disposal
Hazardous Waste	Superfund Sites Interstate Bans & Restrictions Waste Minimization	Increased Involvement And Costs As More Sites Are Identified and Cleaned Up Fewer Places to Send Wastes Increased Costs Mandated Reduction

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

ENVIRONMENTAL ISSUES AND TRENDS

AREA	ISSUES	TRENDS
Community RTK & Emergency Planning	Trade Secrets Data Management Training for Emergency Response	Greater Difficulty To Protect Trade Secrets Increased Demand For Managing & Reporting Data Additional Emergency Response Training For Management
Toxic Substances	Asbestos PCBs Radon Gas Pesticides	More Restrictions On Asbestos Disposal Elimination Of Asbestos Containing Items Bans On More Pesticides

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

ENVIRONMENTAL ISSUES AFFECTING PHILIP MORRIS

I. NATIONAL TRENDS

The nation, the Congress and the President are showing a renewed interest in the environment. We have not seen the proposal of so many new environmental laws since the early 1970s.

Even without these new laws, industry would still be facing a renewed enforcement of environmental law as the current laws, many of which are almost twenty years old, come before Congress for re-authorization or amending. In many cases, the full effect of these laws was not brought to bear on industry that existed when the laws were passed. Existing industry had to reduce gross pollution, but the costs were often moderate. New industry was (and is) required to meet higher standards which are more costly to attain. For example, when old boilers wear out or production equipment is replaced with faster models, new permits must be obtained, following new procedures which dictate the new control standards. More time must be allowed to get permits and more capital spent on pollution control devices.

Testing procedures have also advanced considerably in the past twenty years. Pollution used to be measured in parts per million; now we can measure most chemicals can be measured to parts per billion or even per trillion. At this level, pollutants can be identified in many environments, but are not necessarily at levels which cause problems. The EPA and State regulatory agencies are overloaded with data for which they don't have the resources to interpret. The old laws required the EPA and the states to set numerical standards for individual chemical pollutants. The new tests, public concern, and bureaucratic caution combine each year to make longer lists of regulated materials and lower allowed emission levels. We are being required to spend more time and resources tracking or testing for these chemicals in order to submit reports required by environmental agencies. We don't yet know if we will be required to spend more capital for controls.

Solid waste issues are getting the most attention since the anti-litter laws of the 60s. Congress is showing considerable interest in laws to control refuse and consumer packaging. AIDS has raised nationwide fears about infectious wastes and ocean dumping. Concern about the ozone layer, and the greenhouse effect continue to be debated. Old landfills are filling up or being closed for environmental reasons. New landfills are not being opened because local residents can usually block them. Disposal costs are rising much faster than inflation and other business costs.

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

II. AIR POLLUTION ISSUES

In the early 1970s air pollution was simple to understand and control. Air pollution control agencies were in their infancy, struggling to figure out how to regulate emissions into the air. They began with the obvious types of pollution, dust and dirt, the products of combustion (like sulfur dioxide, carbon monoxide and nitrogen oxide) and solvent type vapors (from gasoline storage). Simple control devices could be installed to filter dust from a gas stream. Proper combustion techniques combined with a fuel low in sulfur and ash content were acceptable controls for many of the combustion sources. White tanks with evaporation barriers prevented vapor loss and satisfied the regulations.

Over the years, the regulators have been acquiring data on types of emissions, amounts of emissions and the quality of the air we breathe in general. The measurement techniques have become more affordable, more reliable, more sensitive (to detecting low concentrations), and therefore more widely used. Not only have pollution measurement techniques improved but so has pollution control technology. This has provided the agencies with data necessary to pass regulations to protect air quality and limit emissions from many sources not originally controlled. The agencies have reduced the amount of emissions they will allow and have expanded the number of pollutants regulated.

A. Ozone Nonattainment

The geographic area to which stringent Volatile Organic Compound (VOC) control regulations apply is expanding. At the same time the regulatory agencies are reviewing their rules to find ways to tighten them up and get more reductions in VOC emissions. The change to the definition of what constitutes a VOC plays a role in this program. Substances not regulated previously are now regulated. Any organic compound emitted as a gas (with a few exceptions) is now suspected of contributing to the formation of photochemical pollution. The expansion of the areas and number of pollutants of concern coupled with the tightening of the regulations will bring our facilities under review for possible emission reductions through the use of add-on technology. A way to head this off is to modify the processes using volatiles (i.e., flavors) to reduce the amount of ethanol used.

Another concern is the trend to limit or eliminate the growth in emissions in these nonattainment areas. New sources of VOC emissions will have to "OFFSET" their emissions by reducing VOC emissions somewhere else in the area. If this is not possible at a facility that we own, it must be accomplished at another facility in

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

the area. This means we either buy VOC controls from someone else (and perhaps incur some responsibility for seeing that they are operated properly), or buy another VOC emitting business and close it! The details of this type of program have not been worked out yet by the states.

B. Federal Toxic Air Emissions Rules

There is renewed emphasis and accelerated progress in controlling major toxic pollutants. Ten source categories will be regulated within the next two years: 25% of source categories within four years, 50% within seven years, and all within ten years. Maximum Available Control Technology will be required to cut pollution sharply. Early, voluntary reductions will be encouraged and credit for those reductions will be provided once standards are set.

C. State Toxic Air Emissions Rules

North Carolina has been working on a rule to control toxic pollutant emissions for several years. The rule is going through final review before official approval is requested from the state's Division of Environmental Management. The rule proposes to regulate the impact of approximately 120 substances.

Kentucky is reviewing the toxic pollutant rule it has on the books. They are considering adding pollutants to that portion of the rule dealing with existing sources. They are also considering making changes to the standards. Nothing formal has been proposed yet.

Virginia has just started the official regulation review process of the rule they already have on the books. It is too early to know what changes will occur.

D. Acid Rain

Amendments to the Clean Air Act Propose cutting sulfur dioxide emissions by 10 million tons by the year 2000 and nitrogen oxide emissions by 2 million tons.

These reductions are to be achieved by the utility industry; industrial boilers are not mentioned at this time. However, other moves are afoot to reduce sulfur dioxide emissions from industrial boilers. (See discussion of NSPS for industrial boilers.)

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

E. Greenhouse Effect

Carbon dioxide (CO2) is the primary pollutant of concern contributing to the Greenhouse Effect (warming of the earth's atmosphere). At this time there is no specific effort by the regulators to limit or reduce CO2 emissions. However, they will get to it eventually. We have some significant CO2 emission sources and are planning more. Each new point of CO2 emissions should employ the latest technology to reclaim and reuse the CO2 rather than venting it to the atmosphere. Regardless of how cheap it is to replenish the CO2, we should reclaim as much as possible, thereby minimizing our impact on the Greenhouse Effect.

F. Proposed Standards For New Small Boilers

The proposed standard forces newly installed small boilers toward very low sulfur oil or natural gas. Coal would have to be low in sulfur and the exhaust gases would have to be scrubbed to meet the proposed limits. Note that Kentucky's limits for coal burning are already as stringent as those proposed. In Louisville we burn a low sulfur #6 oil (S = .8%) to comply with the State rule.

The proposed standard is effective as of the date of proposal, which was June 9, 1989. It may be several years before the rule is promulgated in final form, but the states will probably start using its provisions as their limits in permits issued from now on. We should plan for any new fuel-burning equipment to be oil/natural gas-fired and plan to purchase the low sulfur oil.

G. Lead Time For Permits

Air pollution regulations in Kentucky, North Carolina and Virginia require us to have a permit before we "commence construction." Adequate lead time must be allowed to develop and submit an application and give the Air Board time to review and issue the permit. Six months is the absolute minimum time the Virginia Air Board is taking to issue permits. North Carolina issues permits in ninety days. Kentucky is not issuing permits in less than three to six months.

If we begin construction before a state air agency issues a permit, we are open to enforcement actions and fines of up to $25,000 per day of violation.

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H. Current Air Projects

In the past twelve months, we have tested representative stacks at the BL Plant and Richmond Leaf Processing. By the end of 1989, representative stacks will have been tested at MC Primary, and Annex in Louisville. This testing will alert us to possible violations of the Toxic Rule of the Virginia Department of Air Pollution Control and Jefferson County Air Board. It will also provide us with information to submit complete applications for permits at our facilities in all locations.

Once permits are issued, their terms must be strictly followed. With a permit, we promise or guarantee certain things in order to operate legally and we must remain faithful to these commitments. Examples of permit commitments include:

1. Fuel Type and Quality - We must burn #4 oil with a sulfur content of 1.5%. Switching to a cleaner fuel (i.e. natural gas) can be handled easily, but a change to #6 oil with a 2% sulfur content will not be allowed.

2. Hours of Operation - We should specify continuous operation where appropriate; if something less is in the application, it takes a permit change to increase.

3. Raw Material Throughput - Same as 2.

4. Administrative Reporting - Quarterly reports may be required in a permit and must be on time.

I. Conclusions

Stricter emission limits on more and more pollutants lie ahead. Costs for operation of existing facilities and the construction of new facilities will increase. This will be due to tighter controls on volatile organic emissions, increased fuel costs to burn cleaner fuel, and the addition of pollution abatement devices where none have been required before.

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III. WATER POLLUTION ISSUES

The major water pollution issues of the 1990s will be Federal funding, Combined Sewer Overflows (CSOs), nutrient discharges and toxic discharges. CSOs are combined sanitary and storm sewers which overflow directly to rivers during heavy rain. Most older cities have CSO problems. With the general decline in Federal grant money, state and local governments are having a difficult time financing new wastewater projects. In most localities, sewer bills are already twice as much as water bills. This trend will continue or even increase. Increased sewer costs will increase operating costs in Richmond, Louisville and Cabarrus. Due to its smaller size, the Concord treatment plant has the greatest potential for delay of a major PM expansion due to a lack of wastewater treatment capacity. In the remote event this should occur, we could be required to help Concord expand their wastewater facilities or wait until they do it on their own.

As progress is made toward removing traditional, conventional pollutants, attention is shifting to nutrient and toxicity issues. Last year Virginia limited the discharge of phosphorus to 2 mg/L. Because Park 500 normally discharges 12-14 mg/L we must add new treatment processes to reduce our phosphorus discharge. Construction must be completed within three years. Some environmental groups want a similar limit on the discharge of nitrogen. The Governor has signed an agreement with Maryland to reduce nutrients by 60% but the State will not say if they are considering a nitrogen limit.

Improved laboratory instruments have caused a re-evaluation of the concept of toxicity. When "toxic" chemicals are present at a few parts per billion, or trillion, is the discharge really toxic? What are the combined effects of several toxic chemicals present in trace amounts? To address these questions, the comprehensive chemical testing and tests which expose fish, and other living creatures, to undiluted discharges are required.

Park 500 must perform these tests repeatedly to prove our discharge is non-toxic. If there is a hint of toxicity we must design a program to find the cause and abate it. Previous tests conducted at Park 500 indicate that we do not have a toxicity problem; however, new requirements for more frequent tests present more opportunity for problems to arise.

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A. Current Water Projects

The City of Richmond has begun issuing wastewater discharge permits to PM plants and has requested some analysis of our discharges. Engineering is studying the water and wastewater needs of various projects which might be expanded or introduced at Park 500. To satisfy the City and assist in planning for Park 500, we have started a study to measure the flow and analyze the wastewater from our Richmond plants. We hope to complete this project by the end of the year.

For many months, EEP has been advising Park 500 and Engineering on the State's progress toward imposing the phosphorus limit. Park 500 contracted an engineering firm to conduct bench tests to evaluate various designs for phosphorus removal. On July 31 we received a draft copy of the State's proposed new NPDES permit for Park 500 which establishes conditions and a timetable for meeting the phosphorus limit. The draft is currently under review. A final permit is likely this fall which will require construction to start by the spring of 1990.

In most states, underground tank regulations are administered by water pollution agencies because of their previous authority over groundwater. During the last two years, PM USA has conducted a vigorous program to remove and replace all regulated underground storage tanks. Tanks have been replaced at Park 500, MC, Leaf Processing, and 20th Street. Stockton Street will replace its fuel oil tanks next year and it will be our most expensive and challenging tank job. This site is known to have soil and groundwater contamination due to two pipe leaks. The State and City are already involved and they will insist the clean-up is complete. We have an estimate of $600,000, which could go higher depending on the extent of contamination.

B. Conclusions

Although current water pollution issues are not undergoing rapid changes, like air and solid waste issues, water issues will have a direct and immediate effect on our costs. The upgrade of Park 500's wastewater treatment must take place. The only question is for how much flow do we want to build. Richmond's efforts to reduce combined sewer overflows will certainly cause large increases to our water bills in the near future.

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IV. SOLID AND HAZARDOUS WASTE DISPOSAL ISSUES

Americans produce an average of 1300 pounds of solid waste each year and the country is running out of places to dispose of it. Two social forces - the throwaway mentality on the part of manufacturers and consumers, and the "not-in-my-backyard" (NIMBY) syndrome - have combined to create a serious and growing solid waste problem. More than 40% of the solid waste stream consists of the paper and paper products we discard from our homes, offices and factories. As this deluge of garbage is growing steadily, we must find ways to manage it safely and effectively.

A. Proposed Federal Laws

USEPA's agenda for action has a stated goal of managing 25% of the municipal solid waste through source reduction and recycling by 1992. Several bills have been proposed in Congress to address the solid and hazardous waste management problems currently facing our nation. Some of these bills are as follows:

1. "Waste Minimization & Control Act of 1988" (S.2773, 100th Congress, 2d Session), to amend the Solid Waste Disposal Act and extend authorization through 1992. This Act proposes among other things, the following waste reduction and recycling goals:

   a) Establish a national performance efficiency standard for industrial waste generators in SIC's 20-39, requiring within ten years that total hazardous residuals including emissions, effluents, spills and managed wastes will not exceed five % of production throughput.

   b) Establish a national goal of 25 % municipal solid waste recycling within four years, 50 % within ten years where recycling constitutes least cost disposal, and 10 % municipal solid waste reduction within four years.

   c) Impose a $7.00 per ton fee on virgin materials used for packaging.

2. "Waste Reduction Technical Assistance & Incentive Act of 1987" (100th Congress, 1st Session). The main purpose of this Act is to establish an Office of Waste Reduction in the USEPA in order to provide a central source of direction and information on waste reduction.

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3. "Waste Reduction Act of 1988" (H.R. 2800). Through this Act, Congress declares a national policy that:

a) The generation of waste should be reduced or eliminated at the source, whenever feasible.

b) Waste that is generated should be recycled, whenever feasible.

c) Waste that cannot be reduced or recycled should be treated in an environmentally safe manner.

d) Disposal should be employed only as a last resort and should be conducted in an environmentally safe manner.

The latest is a proposal by Rep. Thomas Luken (D-Ohio) to include, as part of a House Bill to re-authorize Resource Conservation and Recovery Act (RCRA), a national mandate of 50 % recycling and a fee for using virgin materials in certain products. The draft bill would mandate achievement of a 25 % recycling rate for municipalities within four years of passage and 50 % within eight years.

The upcoming re-authorization of RCRA is expected to include or address these areas:

- Waste minimization,
- Landfill ban,
- Organic toxicity test.

B. Proposed State Laws

The individual states are also passing waste minimization laws. California passed one in September. Virginia passed a law in 1988 which requires local government to recycle 25% of their solid wastes by 1995. This law does not apply directly to industry but we will probably be affected.

Consumer packaging is another hot issue. There is interest in laws to ban certain types of plastics and other packaging materials and require only biodegradable materials. This would probably require a federal law but the states can encourage industry by requiring a deposit on all plastics like some states have done for drink bottles and cans.

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C. Restrictions on Hazardous Waste Disposal

In April 1988, the EPA released a final proposed rule that established a schedule for land disposal restrictions in accordance with RCRA's Hazardous & Solid Waste Amendments (HSWA) of 1984. These rules set up a tiered system by which various types of hazardous wastes are banned from landfills without prior treatment. By the early 1990s, all hazardous wastes must be treated or meet strict standards before it can be put into a hazardous waste landfill.

The immediate consequence of these rules has been increased costs and increased difficulty in disposing of many types of wastes. Incineration facilities are no longer accepting certain wastes because they are afraid they will not be able to dispose of the ash. States like South Carolina and Alabama which have hazardous waste landfills are prohibiting them from accepting material from states which do not have such landfills.

D. Current Solid Waste Projects

A comprehensive solid and hazardous waste survey of all facilities is currently being conducted. All Virginia facilities have been surveyed by Employee and Environmental Protection. This information will be maintained current to promote centralized planning for waste minimization and recycling.

E. Conclusions

The trend is clear that the type of wastes regulated as hazardous will be increasing. Disposal of both hazardous and non-hazardous wastes will become more intense and will be more expensive. This certainly will impact PM operations. The annual waste disposal cost for PM-Richmond facilities is about $2.2M, of which only 10% is for hazardous waste.

Waste minimization is one of the few areas where national environmental goals and industry's economic interests clearly coincide. It provides opportunities to deal more efficiently and effectively with wastes that are hazardous to human health and the environment. These opportunities are unique in that they provide immediate financial rewards, increased waste management flexibility to generators, and reduced pressures on the nation's existing treatment and land disposal capacity.

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Although some areas or departments are recycling some of the waste streams, there is still a lot that can be done to reduce our waste. We must adopt a renewed solid waste management ethic that minimizes the amount of waste created by our processes and materials we purchase. That ethic must also maximize the amount of waste materials that are reused and recycled so that we minimize our reliance on landfills and incinerators.

V. COMMUNITY RIGHT-TO-KNOW ISSUES

On the average, there are five industrial chemical accidents in the U.S. each day. Newspaper articles about chemical incidents and industrial emissions are becoming all too common. They have allowed Americans, for the first time, to get a full accounting of what chemicals their industrial neighbors are releasing to the air, water and land around them. The magnitude and number of environmental releases has surprised even environmental experts and has prompted Congress to take action. A 1985 study reported, "The spills and emissions prior to 1985 totaled 420 million pounds of chemicals, 468 instances of death or injury were recorded. The evacuation of at least 217,457 people were involved."

Bhopal, India and Institute, West Virginia altered the way the American public and its lawmakers look at industry. Within the last four years, new rules from OSHA and EPA have profoundly altered the way in which industry is held accountable to the public. OSHA rules establish the Material Safety Data Sheets (MSDS) system and require industry to make MSDS's available to their employees. OSHA also requires a Hazard Communication Program to inform all employees of the dangers they might be exposed to and special training for emergency response personnel, including management. EPA rules extend these employee right-to-know concepts to the community and the general public.

In response to the public's concerns about the risks of chemical releases in their communities, Congress adopted the Emergency Planning and Community Right-to-Know Act of 1986. Known also as SARA or the Superfund Amendments and Reauthorization Act of 1986, its purpose is to "encourage and support emergency planning at the state and local levels" and to "provide citizens and local governments with information about potential chemical hazards in their communities." SARA Title III requires industry to provide information about chemicals stored on-site to: the State Emergency Response Commission, the Local Emergency Planning Committee and the Local Fire Department. In addition, chemicals being released from a facility must be reported to the EPA and to the State Emergency Response Commission.

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Information required to be reported includes:

- Chemical Identities
- Physical and Health Hazards
- Maximum Daily and Average Daily Quantities Stored
- Container Type
- Location Where Stored
- Pounds and Identity of Chemicals going into the Air, Water, and Ground

A. Current Right-To-Know Projects

This new SARA Title III legislation impacts our daily operations by imposing a number of new reporting requirements, by magnifying our visibility in the community, by necessitating improved coordination between diverse groups within Philip Morris, and by moderately limiting our protection of trade secrets as they relate to flavoring ingredients.

One impact of this regulation is that of staffing resources. The EPA estimated that to prepare just the toxic release report alone, that the average facility will need about 200 hours each to pull the data together, estimate releases, and complete the reporting forms. PM is much larger than the average facility. Our strategies this year must take into account this added regulatory burden. Where possible, EEP is automating the data collection and reporting processes. Given the volumes of information required to be stored, sorted and assessed, Philip Morris strategies must include pursuing the completion of its PM USA Health and Safety System. This system is currently 80% complete but final completion must remain a priority thru 1990. It should be noted, that by 1990, nearly all chemicals used or stored at Philip Morris will have to be submitted to the State Emergency Planning Commission, Local Emergency Planning Committee and the local fire department.

Because SARA Title III provides for public access to MSDSs, inventories, and emission releases/mass balance information, media and public scrutiny will certainly increase. In addition, the likelihood of citizen suits and increased enforcement actions are to be anticipated. Philip Morris must prepare itself for this public scrutiny by surveying our materials for chemical components which may invite scrutiny, by preparing to deal with inquiries from citizens as well as local, state and Federal authorities, and by improving our Emergency Response Teams.

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Obtaining correct information for SARA reporting has demanded a high degree of coordination and informational exchange between various groups working within Philip Morris. This has included:

- Purchasing - for reliable figures on usage and updated MSDSs.
- Manufacturing Services - for flavoring and trade secret issues.
- Engineering - for environmental release information.
- R&D - for flavoring and trade secret issues.
- Flavor Center - for labeling and MSDS issues.
- IS - for design and development of the mainframe system.

SARA Title III requires facilities to submit either the Tier 1 or Tier 2 reports to the local Emergency Planning Committee and the local fire department. These reports detail the type and amount of "hazardous chemicals" used and/or stored at PM locations. Chemical identity information that a firm does not want to disclose, because disclosure would cause substantial competitive harm, may be claimed a trade secret under certain conditions.

The flavoring compounds are a concern to Philip Morris. According to SARA, trade secret protection can only be sought for the chemical identity or name, and then only if certain substantiation requirements can be met in advance. In its rulemaking, the EPA has weighed the manufacturer's rights to protect legitimate trade secrets against the public's right to know, and has sided with the public's interests. If the EPA determines that a trade secret claim is frivolous, it may assess a civil penalty of $25,000 per claim. The EPA has defined a frivolous claim as "one without factual or legal basis or one where the facts and circumstances relied upon to substantiate a trade secret are without merit."

PM has met several times over the last year with attorneys from Arnold & Porter, R&D, Manufacturing Services and Purchasing to develop a strategy for achieving full compliance while also protecting our trade secrets. These meetings resulted in an agreement that the following steps be pursued:

- Purchased "single chemicals" will be reported by chemical name (14 flavor chemicals in 1989-1990 reporting). No trade secret protection will be sought.

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- Purchased "mixtures" will be reported by DM code and description (22 purchased flavor mixtures in 1989-1990).

- Philip Morris finished flavors will be reported by DM Code and description (103 PM finished flavor mixtures in 1989-1990). Separate MSDSs will be developed for each of these PM finished flavors.

B. Conclusions

Employee and community right-to-know rules have not yet been fully promulgated by government or implemented by industry. These rules have added to both costs and workload.

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STATELINE

SPECIAL REPORT

THE TOBACCO INSTITUTE
STATE ACTIVITIES DIVISION

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April 4, 1989

1989 STATE & LOCAL LEGISLATION to TAX OR RESTRICT PACKAGING MATERIALS

This is an update to the March 8, 1989 edition of the StateLine Special Report on 1989 State and Local Legislation to Tax or Restrict Packaging Materials.

Background/Developments

From the 1970s to 1986, nearly a dozen states passed litter control, recycling and solid waste disposal programs funded through a variety of assessments or taxes. Most of these taxes were levied on manufacturers, wholesalers or retailers of products deemed to contribute to the litter problem and were generally pegged at a percentage of price or a percentage of gross receipts attributable to these "litter-producing" items, which may include soft drinks, alcoholic beverages and newspapers, as well as cigarettes and other tobacco products. Other states' assessments were levied throughout the entire business community through income, sales or other business tax surcharges. Most of these state laws have since been repealed or replaced with "bottle bills" requiring refundable deposits on beverage containers.

In 1987, however, two new approaches to litter control, solid waste management and problems allegedly associated with use of certain chemicals in packaging materials began to take shape.

Legislation limiting the use of certain materials in containers and packaging was introduced in a number of states in 1987, but these early proposals were not of direct concern to the industry. However, Suffolk County, NY, considered an ordinance that year to ban use of all nonbiodegradable packaging materials in the county. The sponsor's real intent was aimed at fast-food "clamshells" and other containers made of styrofoam-like materials, but the measure was finally passed as a ban only on use of nondegradable plastic bags. A coalition of plastics companies filed suit against the County Executive in an effort to repeal the ordinance. In 1988, a similar ordinance to ban plastic bags was passed in Nassau County, New York.

New variations on the litter control tax have been proposed to tax "litterable" products on an ad valorem basis, or to tax the packaging materials, not the product itself, on a per piece or per pound basis. In 1987, such taxes were introduced in at least three state legislatures (New York, Oregon and Vermont); none passed.

In 1988, bills to tax containers or to restrict the use of certain packaging materials were introduced in ten states. Only one bill was passed (Florida); most were given only cursory consideration, or were quickly amended to limit the scope of affected products, removing tobacco products from the measure. The Florida measure, S1192, was enacted on June 24. It provides for a recycling quota of 50 percent by October 1992 for glass, plastics, plastic-coated paper, aluminum and other metals. If the quota is not met, retailers will be assessed an "advance disposal fee" of one cent per container. If the quota is still not met by 1995, the fee will climb to two cents per container.

No local-level packaging legislation that would affect the tobacco industry directly was considered in 1988.

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Hawaii Several measures have been introduced relating to the degradability of plastics packaging, particularly in food packaging and plastic bags. However, two House bills that originally related only to food packaging were amended to include all packaging and were passed by the House. H167 would now require that all packaging be degradable, reusable, recyclable or combustible. H171 would require that food and retail establishments notify customers in writing as to whether the packaging is or is not degradable, reusable, recyclable or combustible. These bills are pending in the Senate Agriculture Committee. A Senate bill, S196, that would have banned the sale by January 1991 of any product packaged or placed in any nondegradable packaging, did not meet the March 3 deadline for action and is therefore dead for 1989.

Illinois Representative Bowman has introduced H154, the "Container Fee and Deposit Act." H154 would impose a refundable "advance disposal fee" on certain containers that are not being recycled at a rate of at least 50 percent. The bill is pending in the House Energy, Environment and Natural Resources Committee.

Iowa In his "State of the State" message, Governor Branstad recommended comprehensive environmental legislation in 1989, including programs to ensure safe drinking water, quality through groundwater protection, a reforestation program and a future ban on certain nonbiodegradable product and food packaging materials. In his Executive Order Number 36, Governor Branstad declared that state government will be a model for public and private sectors in Iowa in supporting the development, marketing and use of degradable products. His order bans a variety of nondegradable products according to a phase-in schedule beginning with CFC-foam containers by July 1, 1989; garbage bags and foam containers by July 1, 1990; foam packaging materials by January 1, 1990; and disposable plastic containers by January 1, 1992. State agencies are directed to purchase degradable disposable products when those products are reasonably available and cost competitive. State agencies are directed to work with the Iowa Corn Promotion Board to help develop industry sources that provide degradable materials and products for use in disposable packaging products.

A study bill was introduced by Rep. Shoultz, HSB200, that would ban the plastic can, require mandatory plastic container coding and would grant authority for further packaging curbs to a waste reduction bureau. The state Environmental Protection Commission would be authorized to impose disposal fees and rebates on nonrecyclable products and deposits on recyclable products by July 1991. The fees would terminate after five years unless the Commission determines that the funds are required to support the management of waste streams which have been identified for separation or special handling. Another measure, H282, which would levy a 4-cent tax on nondegradable bags, was passed by the House on March 31. H229, which would require state agencies to purchase biodegradable garbage liners, died in the House Energy and Environment Committee.

Indiana Senator Leising introduced legislation, S430, to require governmental bodies to procure degradable plastic products made with cornstarch whenever economically feasible. The bill was reported favorably by the Senate Environmental and Consumer Affairs Committee on February 23. It was passed by the Senate on February 28 and was referred to the House Environmental and Consumer Affairs Committee. It was reported by the committee on March 31 and is pending House floor consideration.

Maine Packaging tax legislation was introduced by Rep. Paradis: L25, to impose a three cent tax on the sale of each container used to package nonfood products and fast-food products, filled or unfilled, which is sold or supplied for resale at retail or as a container for a product for retail sale. Containers which have a refund value or deposit of at least five cents per container would be exempt from the tax. A hearing was held on the measure in the Joint Taxation Committee on February 14 and a work session was held on February 16. No further committee action has been taken. Rep. Ridley introduced legislation, L92, to establish an incentive for the use of packaging which is either recycled at a high rate or is made largely of recycled material. Packaging which does not meet these criteria would be subject to

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Nebraska The Natural Resources Committee held a hearing February 9 on the "Degradable Products Act," L325, introduced by Senator Hefner. The bill would promote the use of degradable plastics by banning the sale of "nondegradable" products -- retail garbage bags, plastic bags, ring connectors and other connecting devices, disposable personal care products and food containers -- over three years. The measure was reported by the Natural Resources Committee on March 15 and has been placed on General File.

New Hampshire H669, introduced by Rep. Malcolm, would prohibit the use of nonbiodegradable single-use plastic items. A hearing was held in the House Environment and Agriculture Committee on February 21; no further action has been taken. Another measure, H746, by Rep. Merrill, would impose a 4-cent disposal fee on containers made of aluminum, cloth, fiber, glass, metal, paper, paperboard, plastic, wood, any combination thereof, or any new material type not listed but used in the manufacture of containers. The manufacturer, wholesaler, seller, supplier, distributor or retailer of a container making the first sale to a container purchaser within the state shall be liable for and shall pay the fee to the state Revenue Department. Containers in the form of wraps or wrappers necessary to protect and maintain a product's freshness, taste, color or hygienic integrity are exempt. The House Environment and Agriculture Committee voted down the bill on March 7. The bill will be combined with deposit legislation and sent to a summer study committee. It is expected to be reconsidered next year.

New Jersey Three packaging tax measures carried over to the 1989 session. A3014 and companion S2460 would impose a 5-cent tax on rigid containers with a capacity of more than six ounces. The Department of Environmental Protection would be authorized to exempt products for which there is no feasible or practical substitute container. S126 would impose a tax on "single use" items made of or packaged in polymeric or petroleum-based nondegradable materials, a rate of one percent of sales in the state.

S126 and S2460 were rereferred to the Senate Revenue and Finance Committee. The Committee developed a substitute based on the provisions of the two bills which would impose a two cent disposal fee at the retail level on food and nonfood products packaged in containers with a capacity of more than six ounces. Three years after enactment, the fee would climb to four cents per nonexempt container. A hearing was held on the committee substitute on March 2 in the Revenue and Finance Committee. The measure was released from the Committee on March 2 and is pending Senate floor consideration. The earliest the bill could be given floor consideration is April 17.

Four other New Jersey bills to limit the use of nondegradable packaging materials also carried over to the 1989 session. They did not receive any consideration by the legislature in 1988. A659 would prohibit the sale of nonbiodegradable products or packaging materials commonly found as litter on beaches. The bill would allow exemptions for products that cannot be substituted with biodegradable materials. A2035 would prohibit the sale of products wrapped in polystyrene plastic or other petroleum-based nondegradable material; the Department of Environmental Protection could make exemptions where there is no feasible or practical substitute. S2566 would prohibit the retail sale or distribution of plastic containers and items marketed in a plastic container made, in whole or in part, of plastic or any other petroleum-based nonbiodegradable material routinely discarded after use or consumption. It would also prohibit the distribution or use of any plastic grocery bags by retail food establishments. S127 would prohibit sale of reusable plastic materials; exemptions would be allowed where there is no feasible alternative. The Senate bills are pending in the Senate Energy and Environment Committee and the Assembly bills are pending in the Assembly Solid Waste Management Committee.

The "Solid Waste Reduction Act," A4077, a 1989 introduction by Assemblyman Spadoro, would impose a three cent tax on containers based upon the recycled materials content, biodegradability, reusability and the rate of recycling of the materials used in the production of the container. The bill also would ban single-use items or products which would include all containers, items and packaging constructed of polyvinyl chloride, polyvinylidene chloride, polypropylene, polystyrene, or transported in containers using plastic packaging materials. A4077 is pending in the Assembly Environment Committee.

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Rhode Island H7030 by Rep. Henseler would impose a waste disposal fee on manufacturers of packaged goods. S1294, by Sen. Goldberg, would create a special commission on estimating a tax on "hard to dispose of" items. These bills are pending in the House and Senate Finance Committees, respectively. Another measure by Sen. Watson, S1308, would impose a 50-cent per gallon surcharge on nonbiodegradable plastic containers used for industrial purposes to be paid by the wholesaler. The bill has been temporarily tabled following a March 8 hearing in the Senate Special Legislation Committee.

Vermont H196 would impose a franchise tax on distributors and manufacturers of "litter stream" products in the state. The tax would be imposed upon each corporation subject to taxation in the state. H196 also would direct the governor to negotiate with other interested states to attempt to develop an interstate compact to provide disincentives to packaging that is not recyclable or biodegradable. The bill has been referred to the Natural Resources and Energy Committee. H404 by Rep. McCormack would impose a one cent packaging tax on consumer products with nonrecyclable packaging. The tax would be assessed at the retail level. The Natural Resources and Energy Committee reported the bill favorably on March 24. It has been sent to the House Ways and Means Committee.

Virginia House Joint Resolution 434 encourages the plastics industry to utilize cornstarch in its manufacturing process to render plastic products biodegradable. The resolution was approved by the House and Senate.

Washington During 1988, the Joint Select Committee on Preferred Solid Waste Management met to consider solid waste management options in order to make recommendations to the legislature in 1989. The committee drafted legislation that contains provisions for source separation and collection, incentives to encourage manufacturers to use recycled feedstock and recyclable packaging materials, and has developed plans for a public education effort. The committee chairman approached industry groups requesting voluntary action by the business community. The Food Marketing Institute is developing model packaging standards for voluntary use by makers of "house" brands. The committee is mandated to consider the feasibility of implementing a tax system to incorporate disposal costs into product prices. The Association of Washington Business is working closely with the committee on the packaging issues.

On January 25, H1481 was introduced by Rep. Chandler to regulate biodegradable plastic solid waste and prohibit the wholesale or retail sale of goods to consumers when nonbiodegradable packaging is used. The bill did not meet the March 15 deadline for committee action and is therefore dead for 1989. H1671, by Rep. Sprenkle, would establish a comprehensive solid waste management program focusing on recycling and source separation. H1671 would also establish a product packaging task force to make recommendations for reducing product packaging in the waste stream. H1671 was amended to include a four year moratorium on local ordinances banning any type of plastics or local packaging taxes. It was reported favorably by the House Environmental Affairs Committee on March 5 and passed the House on March 10. H1671 is pending Senate floor consideration. In addition, Senate Joint Memorial 8002, introduced by Sen. Metcalf, calls for the formation of a Western State Recycling Coalition. The measure would request that delegates from Alaska, Oregon, Idaho, California and Washington attend a meeting in August 1989 to draft an interstate recycling compact. The Resolution passed the Senate and is pending House floor consideration.

Wisconsin The State Legislative Council Subcommittee on Resource Recovery charged with drafting a comprehensive state recycling plan, voted February 28 to include a ban on plastic foam fast food containers and packaging materials by 1995. The subcommittee had already agreed to ban the landfill or incineration of plastic packaging, aluminum, glass or steel containers, corrugated paper or boxes, newspapers and white good items. The proposal also would discourage state purchase of single-use disposable material and requires whenever practical, the purchase of multiple-use durable products by the state. A "throw-away" fee would be imposed on all single-use packaging to be paid by wholesalers. Proceeds of the fee would be used to support recycling grant programs and education.

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Related Issues

The St. Lawrence Starch Company, a Canadian-based corn wet miller company, is marketing a product called Ecostar, a corn starch derivative it claims, when added to plastics, renders them biodegradable when buried. Originally developed in Britain, Ecostar is widely used in film and bags in European countries where laws dictate biodegradable packaging. The company has plants in four U.S. states and in Quebec and Ontario. U.S. corn farmers have taken a keen interest in the issue.

The plastics industry's position is that the photo- or biodegradability of plastics is not the solution to landfill problems. According to the plastics industry, "plastics in landfills are currently not a problem; degradable plastics in a landfill could be."

Other Activities

The National Conference of State Legislatures, in conjunction with the U.S. Environmental Protection Agency and the American Society of Mechanical Engineers, is sponsoring a seminar entitled, "Managing Solid Waste: Options for State Legislative Action." The seminar will be held on June 11-13, 1989 in Breckenridge, Colorado. The deadline for preregistration is May 26, 1989. For more information contact the NCSL Seminars Department at (303) 623-7800.

The U.S. Environmental Protection Agency's Office of Solid Waste Municipal Solid Waste Task Force, created in 1988 to develop a strategy for improving the nation's management of municipal solid waste, issued its final report, "The Solid Waste Dilemma: An Agenda for Action." The final report calls for a "systems" approach to managing municipal solid waste through the complementary use of source reduction, recycling, combustion and landfills. It also underscores the need for a fundamental change in the nation's approach to producing, packaging and disposing of consumer goods.

The Task Force has identified the following objectives for a national agenda for action to solve the municipal solid waste dilemma: increase the waste planning and management information available to states and local communities; increase effective planning by waste handlers, local communities and states; increase source reduction activities by the manufacturing industry, government and citizens; increase recycling by government and by individual and corporate citizens; reduce environmental and health risks from municipal solid waste combustion and landfills. According to the report, although EPA is not recommending the adoption of economic incentives such as packaging taxes, the Agency believes that they are potentially useful tools for further consideration. EPA will assess the efficiency of state and local taxes of products and packaging for their impact on reducing both the volume and toxicity of municipal solid waste. For a copy of the report, contact EPA's Office of Solid Waste in Washington, D.C.

The **Coalition of Northeastern Governors** (CONEG) identified solid waste management as a primary regional policy concern in March 1988. The members of CONEG are William O'Neill (CT), John McKernan, Jr. (ME), Michael Dukakis (MA), Judd Gregg (NH), Thomas Kean (NJ), Mario Cuomo (NY), Robert Casey (PA), Edward DiPrete (RI) and Madeline Kunin (VT).

At their annual conference in August, the Coalition announced its plans to seek ways to reduce the amount of waste in packaging. At the meeting, the Coalition created a Source Reduction Task Force led by Governors Kean and Kunin. The Task Force will make recommendations to the Governors region-wide, coordinating strategy to reduce the volume of packaging materials entering the waste stream and to increase the use of recyclable and non-toxic materials. Industry has been invited to work closely with the Coalition's Task Force in developing recommendations on opportunities for industry to voluntarily reduce packaging.

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AUG 31 1989

(Cont'd)

The firm denied Kohlberg's allegations in a statement:

"We are saddened that Mr. Kohlberg felt it necessary to sue his partners and KKR. We belive he is wrong, both as to the facts and his interpretation of the agreement between us and we fully expect to prevail in court."

The suit comes as Kohlberg Kravis, a superstar in mergers and acquisitions and the leader among leveraged buyout firms, has run into difficulties with some of its properties.

Leveraged buyouts are deals financed mainly with borrowed money that is repaid with the acquired company's cash flow or the sale of its assets.

The firm, whose operations long have been a mystery to the public, reportedly has had trouble selling some of its businesses and several others either are foundering or have been disappointing investments.

For example, New York-based Seaman's Furniture Co., which went private in a $360 million Kohlberg Kravis-engineered LBO two years ago, has said it must renegotiate debt payments, partly because sales growth has not met expectations.

Kohlberg, Kravis and Roberts formed their partnership in 1976, with each of the three serving as general partners who managed the firm and directed its acquisitions and investments.

Kohlberg remained a general partner until 1987, when after a falling-out with Kravis and Roberts over the firm's strategy he became a limited partner, sharing in Kohlberg Kravis' profits but not in its management.

Investor's Daily ★ Thursday, August 31, 1989

CONSUMER BUSINESS

Corporations Begin Cleaning Up Their Acts

▶Wal-Mart Solicits Help, Procter Testing Ways To Recycle Diapers; Arco's New Fuel

By Cathleen Ferraro, *Investor's Daily*

Running a clean business no longer means just keeping the books straight.

Corporations, responding to a groundswell of consumer demand for environmentally compatible products, are starting to make and market goods that promise to keep air, water and land relatively clean.

"Every firm is going to start marketing based on environmental issues in the next five years," predicted Michael Picker, West Coast director of the National Toxics Campaign, a Boston-based citizens group focusing on environmental protection.

Atlantic Richfield's plan to launch a cleaner gasoline has sparked a race among U.S. oil refiners to develop competing fuels. — *See story / page 13*

Already leading the new corporate scramble of the 1990s are such firms as Wal-Mart Stores Inc., Procter & Gamble Co. and Atlantic Richfield Co., as well as some private companies. All are calling for corporations to do more about the environment, and are taking steps on their own.

Wal-Mart, for example, recently approached manufacturers through a newspaper advertisement and private letters to encourage environment-friendly products. The newspaper ad was headlined, "We're looking for quality products that are guaranteed not to last."

The nation's third-largest retailer, Wal-Mart promises to feature new recyclable or reusable products with special shelf tagging, but refuses to say how much space will be dedicated to the improved goods.

"No section of the store can be eliminated or segregated, however," said Wal-Mart spokeswoman Brenda Lockhart. "It will really depend on the manufacturers' response, which has been good so far."

Picker of the National Toxics Campaign said Wal-Mart's drive to offer such products is a major step toward giving the public a chance to make consumer choices based on environmental concerns. But he questioned the depth of the change.

"It's good what Wal-Mart is doing," he said. "It sounds like a great market

Please Turn to Back Page

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Corporations Begin Cleaning Up Their Acts

From page 1

ing opportunity, too. The real question is, will this solve the pollution problem?"

Perhaps not, he added, because major consumers of these environmentally damaging chemical products are not the public but the manufacturers of durable goods who are way upstream from consumers. "The products themselves are not the problem, but the process of how they are made," he said.

In the letter to producers, Wal-Mart did encourage improvements in manufacturing as well as in use and disposal.

Diapers, a staple good for a retailer like Wal-Mart, and their disposal have been a central topic of debate among retailers and environmental groups. About 43 million disposable diapers are discarded daily.

Procter & Gamble's Compost Plan

Part of the debate focuses on whether a truly biodegradable diaper can be made. But Procter & Gamble, a major manufacturer of household consumer products, scoffs at the importance placed on making a fully biodegradable diaper. It claims that diapers made even of biodegradable substances can't fully break down in traditional landfills, which are unexposed to air and water that faciliate degradation. And even if they could break down, the company argues, biodegradable diapers miss the point.

"Our view is that diapers are such a small part of what goes into a landfill," said company spokesman Scott Stewart. "The problem, therefore, is not diapers but how we manage our solid waste. Biodegradable diapers don't work, and they detract attention from the real solution to the environmental problem, which is throwing away less, recycling and composting."

After spending more than $600 million on research last year, Procter & Gamble will launch two programs in November focused on the composting and recycling of diapers.

In the first program, soiled diapers from St. Paul, Minn., will be collected, added to the company's composter and then evaluated for their composting quality. If that quality proves to be good, the company may encourage using composters instead of common landfills for diaper disposal.

The second program, involving diapers from 1,000 Seattle families, will separate the paper and plastic from the diapers and later convert the materials into park benches, planting pots and cardboard boxes.

But a private California firm, American Enviro Products Inc., stands by the viability of biodegradable diapers.

President Robert Chickering says because his company adds cornstarch to the plastic, the diapers can break down in about 1½ years.

"I agree that recycling and composting have to be a part of a sound environmental strategy for the country," he said. "But if the technology is there to make biodegradable diapers, and they do change into water and carbon dioxide, which is not harmful to the environment, then why shouldn't we make them?"

American Enviro was started last January solely to produce the product, and it now sells its diapers in several locations, including Target stores and Lucky Stores Inc.'s Northern California outlets.

On the clean air front, Atlantic Richfield Co. has spent $15 million to $20 million to produce EC-1, a pioneering low-emission fuel.

Scheduled to go on sale in Southern California starting tomorrow, EC-1 is intended to replace leaded fuel used by cars made before 1975 and trucks made before 1980, the two years when pollution-controlling catalytic converters were first required on vehicles.

"Fifteen percent of all cars in Southern California run on these old engines, contributing to 30% of all pollution that cars send out," said Arco spokesman Albert Greenstein.

The biggest advantage to EC-1, he added, is that the low-emission fuel "makes an immediate contribution to cleaning up the air." EC-1 has a head start on other new fuels, such as methanol, which have yet to be mass-marketed and have problems that include eating through conventional gas tanks and plastic engine hoses, another Arco spokesman added.

Safer Inc. Products

Other environmentally safe products include herbicides, pesticides and fungicides made by Safer Inc., a Newton, Mass.-based firm planning to go public within the next three years. Sales this year already have doubled over 1988, signaling both an aggressive ad campaign and consumer acceptance of the goods.

The active ingredient in Safer's products is refined potassium soap that disrupts the cell membranes of soft-bodied insects. Within 48 hours, the soap degrades to carbon dioxide and water, unlike traditional pesticides and insecticides that can take hundreds of years to degrade, according to marketing director Mark Dockser. Accidental swallowing of one of the Safer products, he added, might lead to a severe stomachache, but not hospitalization.

Safer President Craig Taylor predicts 50% of the insecticide market will be served by environmentally compatible products within five years. "And with second- and third-generation patentable technology, we should have an edge on the market," he said.

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August 15, 1989
Vol.4, No.13

ENVIRONMENTAL MANAGEMENT NEWS

Dedicated to the Control of Air, Water, Waste Water, Pollution and Hazardous Materials

Reduction, Recycling Top List

Senators work to amend Solid Waste Disposal Act

At least two bills in the Senate seek to amend the Solid Waste Disposal Act of 1965, updating the law to deal with more complex problems.

S. 1112 and S. 1113 are sponsored by Sens. John H. Chaffee, R-R.I., and Max Baucus, D-Mont., respectively, and were presented in June. Only one hearing has been held and that was before the Senate Committee on Environment and Public Works.

"We're consuming more and more disposable products and we're running out of dumps," Baucus told his colleagues. "So it should come as no surprise that we're on the brink of a nationwide solid waste crisis."

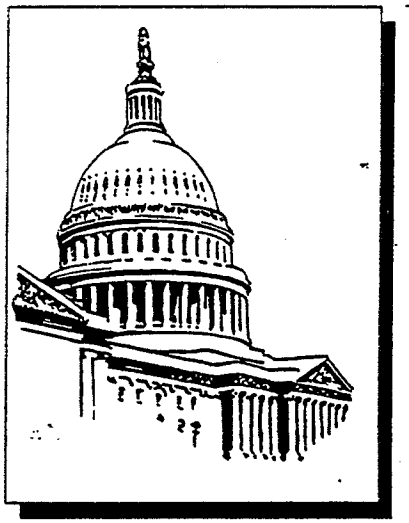
Baucus said landfills are filling up and contributing to other contamination problems. "I recently received a letter from a man in Helena, Mont., whose drinking-water well is contaminated by a rural landfill. His water is laced with so many toxins that he is now forced to drink bottled water," he said.

Baucus said strong legislation such as S. 1112 and S. 1113 should be passed so that "no state becomes a dumping ground for the nation" and "so that today's landfills don't become tomorrow's Superfund sites."

Chaffee's Municipal Solid Waste Source Reduction and Recycling Act of 1989 establishes national goals of the following:

- a 10 percent reduction in municipal solid waste by 1993 as a result of source reduction;
- a 25 percent reduction by the same year as a result of recycling; and
- a 50 percent reduction by 1999 as a result of recycling.

continued on page 2



Safe Route Not Followed

The tractor-trailer driver who died in an accident early this month wasn't following a designated route in Dallas, Texas, for hazardous materials transport.

Carrying polypropylene glycol, a non-hazardous substance, and pressurized titanium and hexane trichloride, a flammable and corrosive compound, the tandem trailer careened off an interstate ramp Aug. 1 and killed William Cook, 31, of Garland, Texas.

The routes were established to restrict vehicle traffic in congested and hard-to-reach places (see June 15 EMN). However, the city has had little police manpower to monitor the use of the safe routes by truckers.

After the Aug. 1 mishap, officials shut down central routes and created an early-morning traffic jam.

The polypropylene leaked from one

continued on page 3

Inside

Mission Earth 3
A NASA satellite project could help fill in the scientific gaps for the Earth's climate, land, crops, ocean and forests. All it needs is support from the Bush administration.

Nuclear or No? 6
EMN wants to know what you think about the future of the nuclear power industry.

Real E$tate 7
Better to clean up than wash out when it comes to buying and selling property. An attorney and a soil scientist tell how.

'Biodynamic' Means Magic

The ingredients of a biodynamic compost sound something like a witch's brew and, surprisingly, its magic is just as potent.

Yarrow blossoms aged in a stag bladder, dandelions in cow membrane or winter-seasoned cow manure mixed with 98.6-degree Fahrenheit water all play an important part in the spiritual growing methods.

The parts of the brew and their preparation are supposed to be tuned in to a cosmic frequency that transmutes the materials into helpful or improving products.

About 1,500 gardeners and 100 farms in the United States practice biodynamic methods. They follow the teachings of an Austrian philosopher/scientist who, 65 years ago, believed that certain methods could balance the spiritual and earthly forces in foods. The farms can be found in California, the Midwest and New England.

Biodynamic foods haven't reached the level of popularity in the U.S. that they have in Europe. In that market, biodynamic products bring prices

continued on page 3

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APPENDIX I

RESOURCE ALLOCATIONS

BY

PROGRAM

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STRATEGIC GOAL NUMBER 1

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Operations Support						
Flavor Specs.						
Adhesive Specs.						
Customer Complaints						
Burley Spray						
Packaging/Inks Specs.						
Process Control Monitoring						
Materials Eval.						
Marlboro Standard-ization						
Cigt Beetle Control						
Microbiology						
Alternate Preservatives						
Materials for High Speed Manufacturing						
Robotics						
Research						
ARD	9.60	4.80	5.40	5.80	8.90	6.90
BCR	14.90	14.90	15.10	15.10	15.10	15.10
CR	0.50	0.40	0.40	0.30	0.40	0.50
PR	3.00	3.00	2.00	2.00	2.00	4.00
Process Development						
DE	2.70	2.50	2.50	2.50	2.50	2.50
TF	1.00	3.00	2.50	-	-	-
TM	4.60	5.60	7.10	5.60	5.60	5.60
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	3.60	3.70	3.55	3.65	3.75	3.75
FD	2.70	0.90	1.80	2.80	2.90	3.00
CD	0.50	0.50	0.50	0.50	0.50	0.50
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	2.45	2.15	2.15	2.35	2.35	2.35
Total Direct	45.55	41.45	43.00	40.60	44.00	44.20
Total Support	34.45	34.40	36.65	36.10	38.60	38.15
TOTAL	80.00	75.85	79.65	76.70	82.60	82.35

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STRATEGIC GOAL NUMBER 1

(continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Project Tomorrow						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	0.20	1.00	1.00	0.50	0.20	0.20
PR	2.50	2.50	4.00	5.50	4.50	2.50
Process Development						
DE	-	-	-	-	-	-
TF	-	0.30	0.50	0.50	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.35	0.55	0.75	0.75	0.75	0.75
FD	-	-	0.20	0.20	0.20	-
CD	1.00	1.50	1.50	1.50	1.50	1.00
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	0.10	0.10	0.10	0.10	0.10	0.10
TI	-	-	-	-	-	-
Total Direct	4.15	5.95	8.05	9.05	7.25	4.55
Total Support	3.80	4.50	7.00	8.20	6.85	4.45
TOTAL	7.95	10.45	15.05	17.25	14.10	9.00

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STRATEGIC GOAL NUMBER 1

(continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Reduced Density Rod						
Research						
ARD	1.10	-	-	-	-	-
BCR	0.55	-	-	-	-	-
CR	0.10	-	-	-	-	-
PR	1.00	-	-	-	-	-
Process Development						
DE	0.50	-	-	-	-	-
TF	11.30	-	-	-	-	-
TM	1.20	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.25	-	-	-	-	-
FD	-	-	-	-	-	-
CD	0.50	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	16.50	-	-	-	-	-
Total Support	4.85	-	-	-	-	-
TOTAL	21.35					

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STRATEGIC GOAL NUMBER 1

(continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Optical Processing						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	5.50	5.50	6.00	5.00	5.00	5.50
Process Development						
DE	0.20	2.50	2.00	1.00	1.00	1.00
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.50	0.50	0.50	0.50	0.50	0.50
Total Direct	6.20	8.50	8.50	6.50	6.50	7.00
Total Support	2.20	2.65	2.75	2.30	2.30	2.45
TOTAL	8.40	11.15	11.25	8.80	8.80	9.45

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1

(continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Tamper Evident Packaging						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	0.10	0.30	1.00	1.00	0.50	0.10
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.05	0.20	0.20	0.45	0.45	0.45
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	0.15	0.50	1.20	1.45	0.95	0.55
Total Support	0.00	0.10	0.25	0.35	0.25	0.10
TOTAL	0.15	0.60	1.45	1.80	1.20	0.65

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1

(continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Project Natural						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	1.0	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	0.20	0.20	0.20	-	-	-
CD	0.50	0.50	0.50	0.50	0.50	0.50
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	0.70	1.70	0.70	0.50	0.50	0.50
Total Support	1.35	2.30	1.30	1.00	1.00	0.95
TOTAL	2.05	4.00	2.00	1.50	1.50	1.45

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1

(Continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Second Generation DIET						
Research						
ARD	1.10	1.60	2.00	2.00	2.00	2.00
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	0.50	0.50	0.50	0.50	0.50
TF	-	6.20	4.00	4.50	5.00	5.00
TM	2.70	1.00	2.00	2.00	2.00	2.00
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	0.55	1.55	1.55	1.30	1.30	1.30
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.25	0.25	0.25	0.25	0.25	0.25
Total Direct	4.60	11.10	10.30	10.55	11.05	11.05
Total Support	3.05	6.45	7.15	7.45	8.60	8.70
TOTAL	7.65	17.55	17.45	18.00	19.65	19.75

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1

(continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
ART Support (Current Product)						
Research						
ARD	19.00	18.10	15.10	12.10	5.00	5.00
BCR	1.45	0.40	-	-	-	-
CR	0.20	0.30	0.10	-	-	-
PR	2.50	1.50	1.50	1.50	1.50	1.50
Process Development						
DE	2.00	2.00	0.50	0.50	-	-
TF	-	-	-	-	-	-
TM	9.30	5.30	4.30	5.30	5.50	5.50
TP&F	-	-	-	-	-	-
Product Development						
PED	2.50	2.50	1.50	-	-	-
CTECH	-	-	-	-	-	-
FD	1.00	0.75	0.25	0.25	0.25	0.10
CD	-	-	0.50	0.50	0.50	0.50
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	37.95	30.85	23.75	20.15	12.75	12.60
Total Support	13.45	11.65	9.30	8.00	5.05	5.00
TOTAL	51.40	42.50	33.05	28.15	17.80	17.60

2021537801

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1

(continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Environmental Issues						
Project Grain						
Nicotine Destruction						
Biodegradability						
Research						
ARD	0.10	0.10	1.00	2.00	3.00	3.10
BCR	-	-	0.50	1.00	1.50	2.00
CR	1.00	2.00	1.00	1.00	1.00	1.00
PR	-	-	-	-	-	-
Process Development						
DE	1.00	1.00	1.00	1.00	1.00	1.00
TF	-	-	-	-	-	-
TM	-	1.00	1.00	1.00	1.00	1.00
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	0.35	0.20	0.10	0.20	0.20	0.20
CD	0.25	0.25	0.50	0.50	0.50	0.50
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	2.70	4.55	5.10	6.70	8.20	8.80
Total Support	1.05	1.65	1.95	2.55	3.05	3.25
TOTAL	3.75	6.20	7.05	9.25	11.25	12.05

2021537802

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1

(continued)

Aggressively Support The Current Business

Direct

Program	Current	1990	1991	1992	1993	1994
Cast Sheet RCB						
Research						
ARD	-	1.30	1.60	1.20	1.10	1.10
BCR	-	-	-	-	-	-
CR	-	0.10	0.10	0.20	0.10	-
PR	-	-	-	-	-	-
Process Development						
DE	-	0.50	0.50	0.50	-	-
TF	-	-	-	-	-	-
TM	-	4.20	4.00	5.00	5.00	5.00
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	0.30	0.50	0.40	0.30	0.30
FD	-	0.70	1.10	1.00	0.90	0.90
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	-	7.10	7.80	8.30	7.40	7.30
Total Support	-	2.55	3.25	3.30	3.00	3.00
TOTAL		**9.65**	**11.05**	**11.60**	**10.40**	**10.30**

2021537803

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2

Develop Products Which Address The Consumers' Desire To Reduce Their Health Concerns

Direct

Program	Current	1990	1991	1992	1993	1994
Project DELTA/Sigma/ Beta						
Research						
ARD	1.10	2.00	2.00	3.00	3.00	4.00
BCR	0.05	0.05	0.05	0.05	0.05	0.05
CR	-	-	-	-	-	-
PR	14.00	14.00	14.00	14.00	14.00	12.00
Process Development						
DE	2.00	2.00	2.00	2.00	2.00	2.00
TF	2.20	2.50	3.00	4.50	4.50	4.50
TM	0.40	0.20	0.20	0.20	0.20	0.20
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	11.05	11.00	12.00	12.75	12.75	12.75
FD	1.55	2.50	2.00	1.00	0.50	0.10
CD	-	-	0.25	0.25	0.25	0.75
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	1.10	1.10	1.10	1.10	1.10	1.10
Total Direct	33.45	35.35	36.60	38.85	38.35	37.45
Total Support	8.35	8.70	9.30	10.05	9.85	9.70
TOTAL	**41.80**	**44.05**	**45.90**	**48.90**	**48.20**	**47.15**

2021537804

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2

(continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Direct

Program	Current	1990	1991	1992	1993	1994
Project ART (Optimize product/process; water column)						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	2.00	2.00	1.50	1.50	1.50	1.50
PR	1.00	1.00	1.00	1.00	1.00	1.00
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	14.80	13.90	12.60	11.60	11.40	11.40
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.60	0.60	-	-	-	-
FD	2.60	2.00	1.00	1.00	0.50	0.10
CD	1.00	1.00	0.50	0.50	0.50	0.50
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.45	0.45	0.45	0.45	0.45	0.45
Total Direct	22.45	20.95	17.05	16.05	15.35	14.95
Total Support	20.75	19.45	16.05	15.55	15.05	14.70
TOTAL	43.20	40.40	33.10	31.60	30.40	29.65

2021537805

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2

(continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Direct

Program	Current	1990	1991	1992	1993	1994
TSNA						
Research						
ARD	-	-	-	-	-	-
BCR	15.20	15.20	15.20	15.10	10.50	8.50
CR	1.00	1.00	1.00	1.00	1.00	1.00
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	0.10	-	0.50	-	0.50	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	0.25	0.25	0.25	0.25
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.10	0.10	0.10	0.10	0.10	0.10
Total Direct	16.40	16.30	17.05	16.45	12.35	9.85
Total	3.30	3.30	3.55	3.55	2.60	2.10
TOTAL	19.70	19.60	20.60	20.00	14.95	11.95

2021537806

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2

(continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Direct

Program	Current	1990	1991	1992	1993	1994
LBA						
Research						
ARD	0.50	0.50	0.50	1.00	1.00	1.00
BCR	13.55	13.65	13.65	14.65	16.65	17.45
CR	1.00	1.00	1.00	1.00	1.00	1.00
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	0.20	0.50	-	0.50	-	0.50
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	0.25	0.25	0.25	0.25
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.40	0.40	0.40	0.40	0.40	0.40
Total Direct	15.65	16.05	15.80	17.80	19.30	20.60
Total Support	3.15	3.30	3.25	3.80	4.15	4.35
TOTAL	18.80	19.35	19.05	21.60	23.45	24.95

2021537807

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2

(continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Direct

Program	Current	1990	1991	1992	1993	1994
Selective Filtration						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	0.50	1.50	1.50	1.50	1.50	2.00
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	0.30	0.30	0.80	0.80	0.80
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.40	0.40	0.50	0.50	0.50	0.50
FD	-	-	0.20	0.20	0.20	0.20
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	0.90	2.20	2.50	3.00	3.00	3.50
Total Support	0.35	0.50	0.75	0.85	0.85	0.95
TOTAL	**1.25**	**2.70**	**3.25**	**3.85**	**3.85**	**4.45**

2021537808

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2

(continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Direct

Program	Current	1990	1991	1992	1993	1994
Supercritical Technology (Compounds other than nicotine; SCFE Support)						
Research						
ARD	3.30	4.40	6.40	5.40	7.00	7.40
BCR	0.50	1.00	1.00	1.00	2.00	2.00
CR	-	-	-	-	-	-
PR	1.50	2.50	3.50	4.50	5.50	5.50
Process Development						
DE	0.10	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	5.40	7.90	10.90	10.90	14.50	14.90
Total Support	1.10	2.50	3.70	3.90	5.25	5.45
TOTAL	6.50	10.40	14.60	14.80	19.75	20.35

2021537809

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 3

Develop New Products which Address the Publics' Desire to Reduce Environmental Tobacco Smoke

Direct

Program	Current	1990	1991	1992	1993	1994
Reduced Sidestream						
Research						
ARD	6.00	6.00	3.00	2.00	1.00	-
BCR	0.50	0.60	1.00	2.00	2.00	2.00
CR	15.50	15.70	13.90	13.00	13.00	13.00
PR	-	-	-	-	-	-
Process Development						
DE	0.50	0.50	0.50	0.50	0.50	0.50
TF	-	-	-	-	-	-
TM	4.00	3.00	3.00	3.00	3.00	3.00
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	4.05	4.05	4.05	4.15	4.15	4.15
FD	1.55	0.75	0.55	0.25	0.25	0.25
CD	0.50	0.50	0.75	0.75	0.75	0.75
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	0.30	0.30	0.30	0.30	0.30	0.30
TI	-	-	-	-	-	-
Staff & TA	1.00	1.00	1.00	1.00	1.00	1.00
Total Direct	33.90	32.40	28.05	26.95	25.95	24.95
Total Support	12.05	11.70	10.70	10.60	10.15	9.75
TOTAL	**45.95**	**44.10**	**38.75**	**37.55**	**36.10**	**34.70**

2021537810

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 3

(continued)

Develop New Products which Address the Publics' Desire to Reduce Environmental Tobacco Smoke

Direct

Program	Current	1990	1991	1992	1993	1994
Project Ambrosia Ash Tray Odor						
Research						
ARD	0.50	0.50	-	-	-	-
BCR	-	-	-	-	-	-
CR	1.50	1.00	1.00	0.20	0.20	0.20
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	0.50	0.50	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	1.55	1.00	0.50	0.15	0.15	0.15
FD	0.65	0.75	0.65	0.40	0.15	-
CD	1.00	1.00	1.00	0.50	0.50	0.50
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	5.20	4.75	3.65	1.25	1.00	0.85
Total Support	4.15	3.65	3.15	1.45	1.20	0.90
TOTAL	9.35	8.40	6.80	2.70	2.20	1.75

2021537811

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 3

(continued)

Develop New Products which Address the Publics' Desire to Reduce Environmental Tobacco Smoke

Direct

Program	Current	1990	1991	1992	1993	1994
ETS						
Research						
ARD	3.80	6.00	6.00	5.00	2.00	2.00
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	0.20	0.25	0.25	0.25	0.25	0.25
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	4.00	6.25	6.25	5.25	2.25	2.25
Total Support	0.70	1.25	1.25	1.10	0.45	0.45
TOTAL	4.70	7.50	7.50	6.35	2.70	2.70

2021537812

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 3

(continued)

Develop New Products which Address the Publics' Desire to Reduce Environmental Tobacco Smoke

Direct

Program	Current	1990	1991	1992	1993	1994
Project PACT						
Research						
ARD	2.20	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	2.00	2.00	2.00	1.00	1.00	1.00
TF	-	-	-	-	-	-
TM	1.00	1.00	1.00	1.00	1.00	1.00
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	1.00	1.00	1.00	1.00	1.00	1.00
Total Direct	6.20	4.00	4.00	3.00	3.00	3.00
Total Support	1.25	0.70	0.80	0.60	0.60	0.60
TOTAL	7.45	4.70	4.80	3.60	3.60	3.60

2021537813

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 4

Develop Products Which Increase Our Volume At The Expense Of Our Competitors To Give Us Our "Fair Share"

Direct

Program	Current	1990	1991	1992	1993	1994
Menthol						
Research						
ARD	0.10	0.10	1.00	1.00	1.00	1.00
BCR	-	-	-	-	-	-
CR	1.00	1.00	0.50	0.50	0.50	0.50
PR	1.50	0.50	-	-	-	-
Process Development						
DE	0.25	0.25	0.25	0.25	0.25	0.25
TF	0.50	1.00	1.50	2.00	2.00	2.00
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.95	0.30	0.30	0.30	0.30	0.30
FD	0.80	1.00	2.00	2.00	2.35	2.60
CD	0.50	0.50	0.50	0.50	0.50	0.50
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	5.60	4.65	6.05	6.55	6.90	7.15
Total Support	5.70	5.20	6.10	6.50	6.90	7.30
TOTAL	11.30	9.85	12.15	13.05	13.80	14.45

2021537814

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 4

(continued)

Develop Products Which Increase Our Volume At The Expense Of Our Competitors To Give Us Our "Fair Share"

Direct

Program	Current	1990	1991	1992	1993	1994
Low Tar/High Flavor						
Research						
ARD	-	-	1.00	1.00	2.00	2.00
BCR	1.10	1.10	1.00	1.00	1.00	1.00
CR	3.00	2.50	2.50	2.00	2.00	2.00
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	1.50	1.50	1.25	1.25	1.00	1.00
FD	2.15	2.00	2.35	2.85	3.25	3.25
CD	2.00	2.00	2.00	2.00	2.00	2.00
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	9.75	9.10	10.10	10.10	11.25	11.25
Total Support	6.65	6.40	7.15	7.45	7.85	7.85
TOTAL	16.40	15.50	17.25	17.55	19.10	19.10

2021537815

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 4

(continued)

Develop Products Which Increase Our Volume At The Expense Of Our Competitors To Give Us Our "Fair Share"

Direct

Program	Current	1990	1991	1992	1993	1994
Domestic Product Support						
Research						
ARD	1.10	1.10	1.00	2.00	1.00	1.00
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	0.50	1.00	1.50	1.50	1.50	1.50
TM	1.60	4.00	5.00	5.00	5.00	5.00
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	1.75	1.85	1.85	2.85	3.10	3.10
FD	3.05	3.05	4.15	4.55	5.05	5.05
CD	3.25	3.25	4.00	4.50	4.50	4.50
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.70	0.70	0.70	0.70	0.70	0.70
Total Direct	11.95	14.95	18.20	21.10	20.85	20.85
Total Support	31.85	34.15	38.95	44.60	45.35	45.20
TOTAL	43.80	49.10	57.15	65.70	66.20	66.05

2021537816

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 4

(continued)

Develop Products Which Increase Our Volume At The Expense Of Our Competitors To Give Us Our "Fair Share"

Direct

Program	Current	1990	1991	1992	1993	1994
Filter Research						
Research						
ARD	1.10	1.10	1.00	2.00	1.00	1.00
BCR	-	-	-	-	-	-
CR	-	0.50	1.50	1.50	1.50	1.50
PR	2.50	2.50	2.50	2.50	2.50	3.00
Process Development						
DE	1.00	0.25	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	1.00	1.00	1.00	1.00	1.00	1.00
FD	0.30	0.30	0.30	0.30	0.30	0.30
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	0.30	0.30	0.10	0.10	0.10	0.05
TI	-	-	-	-	-	-
Total Direct	6.20	5.95	6.40	7.40	6.40	6.85
Total Support	6.15	5.80	6.35	7.25	6.25	6.65
TOTAL	12.35	11.75	12.75	14.65	12.65	13.50

2021537817

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 5

Identify New Product/Process Concepts And Develop Products/Processes For The International Market

Direct

Program	Current	1990	1991	1992	1993	1994
International Product Support						
Research						
ARD	2.40	2.50	3.00	3.50	4.00	4.50
BCR	0.10	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	0.50	1.00	1.00	1.00	1.00	1.00
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	1.40	1.30	1.30	1.80	2.30	2.30
FD	2.10	1.95	2.00	3.00	4.00	4.50
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.30	0.30	0.30	0.30	0.30	0.30
Total Direct	6.80	7.05	7.60	9.60	11.60	12.60
Total Support	17.55	17.30	18.55	20.70	22.65	23.90
TOTAL	24.35	24.35	26.15	30.30	34.25	36.50

2021537818

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 5

(continued)

Identify New Product/Process Concepts And Develop Products/Processes For The International Market

Direct

Program	Current	1990	1991	1992	1993	1994
TMCI BL Process Development						
Research						
ARD	0.10	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	1.10	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	0.05	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	1.25	-	-	-	-	-
Total Support	0.25	-	-	-	-	-
TOTAL	1.50					

2021537819

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 5

(continued)

Identify New Product/Process Concepts And Develop Products/Processes For The International Market

Direct

Program	Current	1990	1991	1992	1993	1994
Reduced Tar & Nicotine						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.50	0.50	0.50	0.50	0.50	0.50
FD	0.20	0.20	0.20	0.20	0.20	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	0.70	0.70	0.70	0.70	0.70	0.50
Total Support	1.35	1.35	1.35	1.35	1.35	1.25
TOTAL	2.05	2.05	2.05	2.05	2.05	1.75

2021537820

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 5

(continued)

Identify New Product/Process Concepts And Develop Products/Processes For The International Market

Program	Current	1990	1991	1992	1993	1994
Filter Research						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	3.00	3.50	3.50	3.50	4.00	4.00
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	3.00	3.50	3.50	3.50	4.00	4.00
Total Support	2.30	2.65	2.75	2.75	3.15	3.10
TOTAL	**5.30**	**6.15**	**6.25**	**6.25**	**7.15**	**7.10**

2021537821

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Combustion Research*						
Mass Burn Control						
Project Tomorrow						
Pyrolysis Temperature Control						
Cigarette With Low						
Burn Temperature						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	0.50	1.00	1.00	1.50
CR	-	0.20	1.00	2.80	3.00	4.00
PR	1.50	1.50	2.50	2.50	2.00	2.00
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.10	0.10	0.10	0.10	0.10	0.10
Total Direct	1.60	1.80	4.10	6.40	6.10	7.60
Total Support	0.35	0.35	0.85	1.30	1.30	1.55
TOTAL	1.95	2.15	4.95	7.70	7.40	9.15

2021537822

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Flavors*						
Thermal Flavor-Release						
Sigma/Beta						
Ambrosia						
Flavor Formation Studies						
Cigarette With Low						
Burn Temperature						
Fragrances						
Ambrosia						
Volatile Flavors						
Cigarette with No ETS						
Research						
ARD	1.10	1.10	3.00	4.00	5.00	5.00
BCR	-	-	-	-	-	-
CR	2.10	1.60	3.70	4.90	5.10	5.00
PR	-	-	-	-	-	-
Process Development						
DE	1.00	1.00	0.25	0.25	0.25	0.25
TF	-	0.50	1.50	2.00	2.00	2.00
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.20	0.45	0.45	0.20	0.20	0.20
FD	2.20	2.20	2.40	2.50	2.50	3.15
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	6.60	6.85	11.30	13.85	15.05	15.60
Total Support	1.25	1.35	2.30	2.85	3.10	3.20
TOTAL	7.85	8.20	13.60	16.70	18.15	18.80

2021537823

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Aerosols*						
Formation Mechanisms						
Sigma/Beta						
Reduced Sidestream						
Cigarette with Low Combustion Temp.						
Short Lived Aerosols						
Cigarette with No ETS						
Selective Filtration						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	0.30	0.10	0.30	0.10	0.50	0.50
PR	2.00	2.00	2.00	2.00	2.00	2.00
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.30	0.30	0.30	0.30	0.30	0.30
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.10	0.10	0.10	0.10	0.10	0.10
Total Direct	2.70	2.50	2.70	2.50	2.90	2.90
Total Support	1.00	0.80	0.90	0.90	1.05	1.05
TOTAL	3.70	3.30	3.60	3.40	3.95	3.95

2021537824

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Selective Separations*						
Supercritical Fluids						
Project ART						
TSNA						
Membrane Separation						
Cigarette With Low Burn Temperature						
Project ART						
Research						
ARD	1.10	2.10	2.00	3.00	4.00	3.00
BCR	0.50	0.50	0.10	0.10	0.10	0.10
CR	0.30	0.30	0.50	0.50	0.50	1.50
PR	-	-	0.50	1.00	1.50	2.00
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.10	0.10	0.10	0.10	0.10	0.10
Total Direct	2.00	3.00	3.20	4.70	6.20	6.70
Total Support	0.35	0.60	0.65	0.95	1.30	1.40
TOTAL	2.35	3.60	3.85	5.65	7.50	8.10

2021537825

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Consumer Testing Res.*						
Regression-Based Modelling of Liking						
Stochastic Discrimination Models						
Cost/Benefit Evaluation						
Quantitative Modelling of Market Dynamics						
Research						
ARD	-	-	-	-	-	-
BCR	2.00	2.00	2.00	2.00	2.00	2.00
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	2.50	3.50	3.50	4.00	4.00	5.00
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total direct	4.50	5.50	5.50	6.00	6.00	7.00
Total Support	1.20	1.10	1.40	1.50	1.50	1.75
TOTAL	5.70	6.60	6.90	7.50	7.50	8.75

2021537826

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Measurement & Sensing of Physical & Chemical Characteristics*						
Process Control Systems						
Optical Processing						
Project ART						
Adhesive Application						
Research						
ARD	0.50	0.50	1.00	2.00	4.00	4.00
BCR	-	-	-	-	-	-
CR	1.20	1.00	1.00	1.00	1.00	0.50
PR	-	1.00	1.00	1.00	1.00	1.00
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Staff & TA	0.10	0.10	0.10	0.10	0.10	0.10
Total Direct	1.80	2.60	3.10	4.10	6.10	5.60
Total Staff	0.35	0.50	0.60	0.85	1.30	1.00
TOTAL	2.15	3.10	3.70	4.95	7.40	6.60

2021537827

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Biological*						
Antibodies						
New Analytical Methods						
Biosensors						
Process Control Systems						
Research						
ARD	1.20	1.20	2.00	2.00	2.00	2.00
BCR	2.60	2.60	2.90	3.00	5.10	5.30
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	3.80	3.80	4.90	5.00	7.10	7.30
Total Support	0.70	0.70	0.95	1.05	1.45	1.65
TOTAL	4.50	4.50	5.85	6.05	8.55	8.95

2021537628

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Computing Systems*						
Expert Systems and Neural Networks						
Process Control						
Optical Computing						
QA Inspection						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	0.10	0.10	0.10	0.10	0.10	0.10
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	0.50	0.50	0.50	0.50	0.50	0.50
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	2.70	2.70	3.30	3.50	3.50	3.50
TI	-	-	-	-	-	-
Staff & TA	0.35	0.35	0.35	0.35	0.35	0.35
Total Direct	3.65	3.65	4.25	4.45	4.45	4.45
Total Support	0.70	0.70	0.85	0.95	0.95	0.95
TOTAL	4.35	4.35	5.10	5.40	5.40	5.40

2021537829

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Direct

Program	Current	1990	1991	1992	1993	1994
Basic Analytical Research						
New Analytical Methods						
Research						
ARD	-	-	-	-	2.00	4.00
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	-	-
TI	-	-	-	-	-	-
Total Direct	-	-	-	-	2.00	4.00
Total Support	-	-	-	-	0.35	0.80
TOTAL	-	-	-	-	2.35	4.80

2021537830

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
Operations Support						
Flavor Specs.						
Adhesive Specs.						
Customer Complaints						
Burley Spray						
Packaging/Inks Specs.						
Process Control Monitoring						
Materials Eval.						
Marlboro Standard-ization						
Cigt Beetle Control						
Microbiology						
Alternate Preservatives						
Materials for High Speed Manufacturing						
Robotics						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	17.80	17.90	19.10	18.70	20.00	20.10
Product Development						
PED	2.30	2.10	2.45	2.90	2.90	2.75
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	3.60	3.50	3.70	3.50	3.85	3.70
CTEST	5.50	6.00	6.40	6.20	6.60	6.50
CAD	3.85	3.60	3.70	3.50	3.85	3.70
TI	1.40	1.30	1.30	1.30	1.40	1.40
Total Support	34.45	34.40	36.65	36.10	38.60	38.15

2021537831

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1
(Continued)

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
Project Tomorrow						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	0.65	0.65	1.10	1.40	1.15	0.70
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.90	1.30	2.00	2.30	1.90	1.20
Product Development						
PED	0.45	0.50	0.85	0.90	0.85	0.60
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.35	0.40	0.65	0.80	0.65	0.40
CTEST	1.00	1.00	1.50	1.70	1.40	1.00
CAD	0.35	0.45	0.65	0.80	0.65	0.40
TI	0.10	0.20	0.25	0.30	0.25	0.15
Total Support	3.80	4.50	7.00	8.20	6.85	4.45

2021537832

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1
(Continued)

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
Reduced Density Rod						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.90	-	-	-	-	-
Product Development						
PED	0.25	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	1.30	-	-	-	-	-
CTEST	0.50	-	-	-	-	-
CAD	1.35	-	-	-	-	-
TI	0.55	-	-	-	-	-
Total Support	4.85					

2021537833

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1
(Continued)

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
Optical Processing						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	1.00	1.00	1.10	1.00	1.00	1.00
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.50	0.70	0.70	0.55	0.55	0.60
CTEST	-	-	-	-	-	-
CAD	0.50	0.70	0.70	0.55	0.55	0.60
TI	0.20	0.25	0.25	0.20	0.20	0.25
Total Support	2.20	2.65	2.75	2.30	2.30	2.45

2021537834

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1
(Continued)

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
Tamper Evident Packaging						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	0.05	0.10	0.15	0.10	0.05
CTEST	-	-	-	-	-	-
CAD	-	0.05	0.10	0.15	0.10	0.05
TI	-	-	0.05	0.05	0.05	-
Total Support	-	0.10	0.25	0.35	0.25	0.10

2021537835

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1
(Continued)

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
Project Natural						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.50	1.30	0.50	0.40	0.40	0.40
Product Development						
PED	0.25	0.25	0.25	0.20	0.20	0.20
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.05	0.10	0.05	0.05	0.05	0.05
CTEST	0.50	0.50	0.40	0.30	0.30	0.30
CAD	0.05	0.10	0.05	0.05	0.05	0.05
TI	-	0.05	0.05	-	-	-
Total Support	1.35	2.30	1.30	1.00	1.00	1.00

2021537836

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1

Aggressively Support The Current Business

Program	Current	1990	1991	1992	1993	1994
Second Generation DIET						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	0.75	1.30	1.55	1.75	1.90	2.00
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.70	1.90	2.00	2.10	2.20	2.20
Product Development						
PED	0.20	0.50	0.55	0.45	0.45	0.45
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.35	0.90	0.85	0.90	0.95	0.95
CTEST	0.50	0.50	1.00	1.00	1.80	1.80
CAD	0.40	1.00	0.95	0.90	0.95	0.95
TI	0.15	0.35	0.25	0.35	0.35	0.35
Total Support	3.05	6.45	7.15	7.45	8.60	8.70

2021537837

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1
(Continued)

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
ART Support (Current Product)						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	2.70	2.40	1.90	1.60	1.00	1.00
Product Development						
PED	0.35	0.25	0.25	0.25	0.25	0.20
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	3.00	2.45	1.95	1.75	1.10	1.10
CTEST	3.00	3.00	2.40	2.00	1.20	1.20
CAD	3.15	2.55	2.05	1.75	1.10	1.10
TI	1.25	1.00	0.75	0.65	0.40	0.40
Total Support	13.45	11.65	9.30	8.00	5.05	5.00

2021537838

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1
(Continued)

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
Environmental Issues						
Project Grain						
Nicotine Destruction						
Biodegradability						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.30	0.60	0.70	0.90	1.10	1.20
Product Development						
PED	0.20	0.15	0.25	0.25	0.25	0.25
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.20	0.35	0.40	0.60	0.70	0.75
CTEST	-	-	-	-	-	-
CAD	0.25	0.40	0.45	0.60	0.70	0.75
TI	0.10	0.15	0.15	0.20	0.30	0.30
Total Support	1.05	1.65	1.95	2.55	3.05	3.25

2021537839

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 1
(Continued)

Aggressively Support The Current Business

Support

Program	Current	1990	1991	1992	1993	1994
Cast Sheet RCB						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	0.70	1.00	1.00	1.00	1.00
Product Development						
PED	-	0.15	0.15	0.15	0.15	0.15
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	0.55	0.65	0.75	0.65	0.65
CTEST	-	0.30	0.50	0.40	0.30	0.30
CAD	-	0.65	0.70	0.75	0.65	0.65
TI	-	0.20	0.25	0.25	0.25	0.25
Total Support		2.55	3.25	3.30	3.00	3.00

2021537840

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2

Develop Products Which Address The Consumers' Desire To Reduce Their Health Concerns

Support

Program	Current	1990	1991	1992	1993	1994
Project DELTA/Sigma/ Beta						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.80	0.90	0.90	1.00	1.00	1.00
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	2.70	2.80	3.10	3.40	3.30	3.25
CTEST	1.00	1.00	1.00	1.00	1.00	1.00
CAD	2.75	2.90	3.20	3.40	3.30	3.25
TI	1.10	1.10	1.10	1.25	1.25	1.20
Total Support	8.35	8.70	9.30	10.05	9.85	9.70

2021537841

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2
(Continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Support

Program	Current	1990	1991	1992	1993	1994
Project ART (Optimize product/process; water column)						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	3.65	2.45	2.35	2.40	2.40	2.40
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	10.80	11.20	9.30	8.80	8.60	8.50
Product Development						
PED	1.40	1.20	0.55	0.55	0.35	0.20
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	1.80	1.65	1.40	1.40	1.35	1.30
CTEST	0.50	0.50	0.50	0.50	0.50	0.50
CAD	1.90	1.75	1.45	1.40	1.35	1.30
TI	0.70	0.70	0.50	0.50	0.50	0.50
Total Support	20.75	19.45	16.05	15.55	15.05	14.70

2021537842

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2
(Continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Support

Program	Current	1990	1991	1992	1993	1994
TSNA						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.10	0.10	0.10	0.10	0.10	0.10
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	1.30	1.30	1.45	1.45	1.05	0.85
CTEST	-	-	-	-	-	-
CAD	1.40	1.40	1.50	1.45	1.05	0.85
TI	0.50	0.50	0.50	0.55	0.40	0.30
Total Support	3.30	3.30	3.55	3.55	2.60	2.10

2021537843

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2
(Continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Support

Program	Current	1990	1991	1992	1993	1994
LBA						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.10	0.10	0.10	0.10	0.10	0.10
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	1.25	1.30	1.30	1.55	1.70	1.80
CTEST	-	-	-	-	-	-
CAD	1.30	1.35	1.35	1.55	1.70	1.80
TI	0.50	0.55	0.50	0.60	0.65	0.65
Total Support	3.15	3.30	3.25	3.80	4.15	4.35

2021537844

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2
(Continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Support

Program	Current	1990	1991	1992	1993	1994
Selective Filtration						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	0.15	0.15	0.25	0.25	0.25	0.25
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.05	0.15	0.20	0.25	0.25	0.30
CTEST	-	-	-	-	-	-
CAD	0.10	0.15	0.20	0.25	0.25	0.30
TI	0.05	0.05	0.10	0.10	0.10	0.10
Total Support	0.35	0.50	0.75	0.85	0.85	0.95

2021537845

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 2
(Continued)

Develop Products Which Address The Consumers' Desire
To Reduce Their Health Concerns

Support

Program	Current	1990	1991	1992	1993	1994
Supercritical Technology (Compounds other than nicotine; SCFE Support)						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	0.90	1.50	1.65	2.30	2.35
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.45	0.65	0.90	0.95	1.25	1.30
CTEST	-	-	-	-	-	-
CAD	0.50	0.70	0.95	0.95	1.25	1.30
TI	0.15	0.25	0.35	0.35	0.45	0.50
Total Support	1.10	2.50	3.70	3.90	5.25	5.45

2021537846

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 3

Develop New Products which Address the Publics' Desire to Reduce Environmental Tobacco Smoke

Support

Program	Current	1990	1991	1992	1993	1994
Reduced Sidestream						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	2.90	3.10	2.70	2.60	2.50	2.40
Product Development						
PED	2.05	1.75	1.85	1.85	1.80	1.70
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	2.70	2.60	2.35	2.35	2.25	2.15
CTEST	0.50	0.50	0.50	0.50	0.50	0.50
CAD	2.85	2.75	2.45	2.35	2.25	2.15
TI	1.05	1.00	0.85	0.95	0.85	0.85
Total Support	12.05	11.70	10.70	10.60	10.15	9.75

2021537847

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 3
(Continued)

Develop New Products which Address the Publics' Desire to Reduce Environmental Tobacco Smoke

Support

Program	Current	1990	1991	1992	1993	1994
Project Ambrosia Ash Tray Odor						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	0.85	0.55	0.50	0.20	0.15	0.15
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.20	0.20	0.20	0.10	0.10	0.10
Product Development						
PED	1.10	0.90	0.75	0.40	0.30	0.20
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.40	0.40	0.30	0.10	0.10	0.05
CTEST	1.00	1.00	1.00	0.50	0.40	0.30
CAD	0.45	0.45	0.30	0.10	0.10	0.05
TI	0.15	0.15	0.10	0.05	0.05	0.05
Total Support	4.15	3.65	3.15	1.45	1.20	0.90

2021537848

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 3
(Continued)

Develop New Products which Address the Publics' Desire to Reduce Environmental Tobacco Smoke

Support

Program	Current	1990	1991	1992	1993	1994
ETS						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.30	0.50	0.50	0.45	0.20	0.20
CTEST	-	-	-	-	-	-
CAD	0.30	0.55	0.55	0.45	0.20	0.20
TI	0.10	0.20	0.20	0.20	0.05	0.05
Total Support	0.70	1.25	1.25	1.10	0.45	0.45

2021537849

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 3
(Continued)

Develop New Products which Address the Publics' Desire to Reduce Environmental Tobacco Smoke

Support

Program	Current	1990	1991	1992	1993	1994
Project PACT						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.50	0.30	0.35	0.25	0.25	0.25
CTEST	-	-	-	-	-	-
CAD	0.55	0.30	0.35	0.25	0.25	0.25
TI	0.20	0.10	0.10	0.10	0.10	0.10
Total Support	1.25	0.70	0.80	0.60	0.60	0.60

2021537850

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 4

Develop Products Which Increase Our Volume At The Expense Of Our Competitors To Give Us Our "Fair Share"

Support

Program	Current	1990	1991	1992	1993	1994
Menthol						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.80	0.70	0.90	1.00	1.10	1.20
Product Development						
PED	0.75	0.60	1.00	1.00	1.00	1.15
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.45	0.35	0.50	0.55	0.60	0.60
CTEST	3.00	3.00	3.00	3.20	3.40	3.50
CAD	0.50	0.40	0.55	0.55	0.60	0.60
TI	0.20	0.15	0.15	0.20	0.20	0.25
Total Support	5.70	5.20	6.10	6.50	6.90	7.30

2021537851

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 4
(Continued)

Develop Products Which Increase Our Volume At The Expense Of Our Competitors To Give Us Our "Fair Share"

Support

Program	Current	1990	1991	1992	1993	1994
Low Tar/High Flavor						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.80	0.80	0.90	0.90	1.00	1.00
Product Development						
PED	1.90	1.85	2.00	2.20	2.20	2.20
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.80	0.70	0.85	0.90	0.95	0.95
CTEST	2.00	2.00	2.20	2.20	2.40	2.40
CAD	0.85	0.75	0.90	0.90	0.95	0.95
TI	0.30	0.30	0.30	0.35	0.35	0.35
Total Support	6.65	6.40	7.15	7.45	7.85	7.85

2021537852

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 4
(Continued)

Develop Products Which Increase Our Volume At The Expense Of Our Competitors To Give Us Our "Fair Share"

Support

Program	Current	1990	1991	1992	1993	1994
Domestic Product Support						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	1.90	1.80	2.50	3.20	3.30	3.30
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	4.70	6.50	8.00	9.10	9.10	9.20
Product Development						
PED	8.95	8.80	9.90	11.70	11.95	11.75
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.95	1.15	1.50	1.90	1.80	1.80
CTEST	14.00	14.20	14.90	16.10	16.70	16.70
CAD	1.00	1.25	1.60	1.90	1.80	1.80
TI	0.35	0.45	0.55	0.70	0.70	0.65
Total Support	31.85	34.15	38.95	44.60	45.35	45.20

2021537853

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 4
(continued)

Develop Products Which Increase Our Volume At The Expense Of Our Competitors To Give Us Our "Fair Share"

Support

Program	Current	1990	1991	1992	1993	1994
Filter Research						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	1.00	0.70	0.90	1.15	1.00	1.10
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.50	0.50	0.50	0.60	0.50	0.50
Product Development						
PED	0.45	0.45	0.45	0.45	0.45	0.45
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.50	0.45	0.55	0.65	0.55	0.60
CTEST	3.00	3.00	3.20	3.50	3.00	3.20
CAD	0.50	0.50	0.55	0.65	0.55	0.60
TI	0.20	0.20	0.20	0.25	0.20	0.20
Total Support	6.15	5.80	6.35	7.25	6.25	6.65

2021537854

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 5

Identify New Product/Process Concepts And Develop Products/Processes For The International Market

Support

Program	Current	1990	1991	1992	1993	1994
International Product Support						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	3.90	2.90	3.50	4.20	4.70	4.90
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	8.30	9.50	9.90	10.40	11.00	11.50
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	2.00	2.00	2.15	2.40	2.55	2.65
CTEST	0.50	-	-	0.40	0.90	1.20
CAD	2.10	2.10	2.20	2.40	2.55	2.65
TI	0.75	0.80	0.80	0.90	0.95	1.00
Total Support	17.55	17.30	18.55	20.70	22.65	23.90

2021537855

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 5
(Continued)

Identify New Product/Process Concepts And Develop Products/Processes For The International Market

Support

Program	Current	1990	1991	1992	1993	1994
TMCI BL Process Development						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.10	-	-	-	-	-
CTEST	-	-	-	-	-	-
CAD	0.10	-	-	-	-	-
TI	0.05	-	-	-	-	-
Total Support	0.25					

2021537856

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 5
(Continued)

Identify New Product/Process Concepts And Develop Products/Processes For The International Market

Support

Program	Current	1990	1991	1992	1993	1994
Reduced Tar & Nicotine						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	0.25	0.25	0.25	0.25	0.25	0.15
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.05	0.05	0.05	0.05	0.05	0.05
CTEST	1.00	1.00	1.00	1.00	1.00	1.00
CAD	0.05	0.05	0.05	0.05	0.05	0.05
TI	-	-	-	-	-	-
Total Support	1.35	1.35	1.35	1.35	1.35	1.25

2021537857

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 5
(Continued)

Identify New Product/Process Concepts And Develop Products/Processes For The International Market

Support

Program	Current	1990	1991	1992	1993	1994
Filter Research						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	0.20	0.30	0.30	0.30	0.30	0.30
Product Development						
PED	1.00	1.15	1.25	1.25	1.40	1.35
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.25	0.30	0.30	0.30	0.35	0.35
CTEST	0.50	0.50	0.50	0.50	0.60	0.60
CAD	0.25	0.30	0.30	0.30	0.35	0.35
TI	0.10	0.10	0.10	0.10	0.15	0.15
Total Support	2.30	2.65	2.75	2.75	3.15	3.10

2021537858

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Combustion Research*						
Mass Burn Control						
Project Tomorrow						
Pyrolysis Temperature Control						
Cigarette With Low						
Burn Temperature						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.15	0.15	0.35	0.55	0.55	0.65
CTEST	-	-	-	-	-	-
CAD	0.15	0.15	0.35	0.55	0.55	0.65
TI	0.05	0.05	0.15	0.20	0.20	0.25
Total	0.35	0.35	0.85	1.30	1.30	1.55

2021537859

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6
(Continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Flavors*						
Thermal Flavor-Release						
Sigma/Beta						
Ambrosia						
Flavor Formation Studies						
Cigarette With Low Burn Temperature						
Fragrances						
Ambrosia						
Volatile Flavors						
Cigarette With No ETS						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.50	0.55	0.95	1.20	1.30	1.35
CTEST	-	-	-	-	-	-
CAD	0.55	0.60	1.00	1.20	1.30	1.35
TI	0.20	0.20	0.35	0.45	0.50	0.50
Total Support	1.25	1.35	2.30	2.85	3.10	3.20

2021537860

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6
(Continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Aerosols*						
Formation Mechanisms						
Sigma/Beta						
Reduced Sidestream Cigarette with Low Combustion Temp.						
Short Lived Aerosols						
Cigarette with No ETS Selective Filtration						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	0.45	0.30	0.35	0.40	0.45	0.45
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.20	0.20	0.20	0.20	0.25	0.25
CTEST	-	-	-	-	-	-
CAD	0.25	0.20	0.25	0.20	0.25	0.25
TI	0.10	0.10	0.10	0.10	0.10	0.10
Total Support	1.00	0.80	0.90	0.90	1.05	1.05

2021537861

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6
(Continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Selective Separations*						
Supercritical Fluids						
Project ART						
TSNA						
Membrane Separation						
Cigarette With Low Burn Temperature						
Project ART						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.15	0.25	0.25	0.40	0.55	0.60
CTEST	-	-	-	-	-	-
CAD	0.15	0.25	0.30	0.40	0.55	0.60
TI	0.05	0.10	0.10	0.15	0.20	0.20
Total	0.35	0.60	0.65	0.95	1.30	1.40

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6
(Continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Consumer Testing Res.*						
Regression-Based Modelling of Liking						
Stochastic Discrimination Models						
Cost/Benefit Evaluation						
Quantitative Modelling of Market Dynamics						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	0.30	0.10	0.30	0.30	0.30	0.30
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.35	0.40	0.45	0.50	0.50	0.60
CTEST	-	-	-	-	-	-
CAD	0.40	0.45	0.50	0.50	0.50	0.60
TI	0.15	0.15	0.15	0.20	0.20	0.25
Total Support	1.20	1.10	1.40	1.50	1.50	1.75

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6
(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Measurement & Sensing of Physical & Chemical Characteristics*						
Process Control Systems						
Optical Processing						
Project ART						
Adhesive Application						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.15	0.20	0.25	0.35	0.55	0.40
CTEST	-	-	-	-	-	-
CAD	0.15	0.20	0.25	0.35	0.55	0.40
TI	0.05	0.10	0.10	0.15	0.20	0.20
Total Support	0.35	0.50	0.60	0.85	1.30	1.00

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6
(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Biological*						
Antibodies						
New Analytical Methods						
Biosensors						
Process Control Systems						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.30	0.30	0.40	0.45	0.60	0.70
CTEST	-	-	-	-	-	-
CAD	0.30	0.30	0.40	0.45	0.60	0.70
TI	0.10	0.10	0.15	0.15	0.25	0.25
Total Support	0.70	0.70	0.95	1.05	1.45	1.65

2021537865

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6
(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Computing Systems*						
Expert Systems and Neural Networks						
Process Control						
Optical Computing						
QA Inspection						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	0.30	0.30	0.35	0.40	0.40	0.40
CTEST	-	-	-	-	-	-
CAD	0.30	0.30	0.35	0.40	0.40	0.40
TI	0.10	0.10	0.15	0.15	0.15	0.15
Total Support	0.70	0.70	0.85	0.95	0.95	0.95

2021537866

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

STRATEGIC GOAL NUMBER 6
(continued)

Provide A Broad Foundation Of Basic Research That Will Generate New Product Concepts In 5-15 Years

Support

Program	Current	1990	1991	1992	1993	1994
Basic Analytical Research						
New Analytical Methods						
Research						
ARD	-	-	-	-	-	-
BCR	-	-	-	-	-	-
CR	-	-	-	-	-	-
PR	-	-	-	-	-	-
Process Development						
DE	-	-	-	-	-	-
TF	-	-	-	-	-	-
TM	-	-	-	-	-	-
TP&F	-	-	-	-	-	-
Product Development						
PED	-	-	-	-	-	-
CTECH	-	-	-	-	-	-
FD	-	-	-	-	-	-
CD	-	-	-	-	-	-
R&D Support						
AS	-	-	-	-	0.15	0.35
CTEST	-	-	-	-	-	-
CAD	-	-	-	-	0.15	0.35
TI	-	-	-	-	0.05	0.10
Total Support	-	-	-	-	0.35	0.80

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APPENDIX J

RESOURCE ALLOCATIONS

BY

DIVISION

2021537869

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Analytical Research Division
(Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	9.60	4.80	5.40	5.80	8.90	6.90
Reduced Density Rod	1.10	--	--	--	--	--
2nd Generation DIET	1.10	1.60	2.00	2.00	2.00	2.00
ART Support	19.00	18.10	15.10	12.10	5.00	5.00
Environmental Issues	0.10	0.10	1.00	2.00	3.00	3.10
Cast Sheet RCB	--	1.30	1.60	1.20	1.10	1.10
Sub Total	**30.90**	**25.90**	**25.10**	**23.10**	**20.00**	**18.10**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	1.10	2.00	2.00	3.00	3.00	4.00
LBA	0.50	0.50	0.50	1.00	1.00	1.00
Supercritical Technology	3.30	4.40	6.40	5.40	7.00	7.40
Sub Total	**4.90**	**6.90**	**8.90**	**9.40**	**11.00**	**12.40**
Strategic Goal No. 3						
Reduced Sidestream	6.00	6.00	3.00	2.00	1.00	--
Project Ambrosia	0.50	0.50	--	--	--	--
ETS	3.80	6.00	6.00	5.00	2.00	2.00
Project PACT	2.20	--	--	--	--	--
Sub Total	**12.50**	**12.50**	**9.00**	**7.00**	**3.00**	**2.00**
Stragetic Goal No. 4						
Menthol	0.10	0.10	1.00	1.00	1.00	1.00
Low Tar/High Flavor	--	--	1.00	1.00	2.00	2.00
Domestic Product Support	1.10	1.10	1.00	2.00	1.00	1.00
Filter Research	1.10	1.10	1.00	2.00	1.00	1.00
Sub Total	**2.30**	**2.30**	**4.00**	**6.00**	**5.00**	**5.00**
Strategic Goal No. 5						
International Product Support	2.40	2.50	3.00	3.50	4.00	4.50
TMCI BL Process Dev.	0.10	--	--	--	--	--
Sub Total	**2.50**	**2.50**	**3.00**	**3.50**	**4.00**	**4.50**

2021537870

Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Strategic Goal No. 6

Flavors	1.10	1.10	3.00	4.00	5.00	5.00
Selective Separations	1.10	2.10	2.00	3.00	4.00	3.00
Measurement & Sensing of Physical & Chemical Characteristics	0.50	0.50	1.00	2.00	4.00	4.00
Biological	1.20	1.20	2.00	2.00	2.00	2.00
Basic Analytical Res.	--	--	--	--	2.00	4.00
Sub Total	**3.90**	**4.90**	**8.00**	**11.00**	**17.00**	**18.00**
TOTAL	**57.00**	**55.00**	**58.00**	**60.00**	**60.00**	**60.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Biochmical Research Division
(Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	14.90	14.90	15.10	15.10	15.10	15.10
Reduced Density Rod	0.55	--	--	--	--	--
ART Support	1.45	0.40	--	--	--	--
Environmental Issues	--	--	0.50	1.00	1.50	2.00
Sub Total	**16.90**	**15.30**	**15.60**	**16.10**	**16.60**	**17.10**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	0.05	0.05	0.05	0.05	0.05	0.05
TSNA	15.20	15.20	15.20	15.10	10.50	8.50
LBA	13.55	13.65	13.65	14.65	16.65	17.45
Supercritical Technology	0.50	1.00	1.00	1.00	2.00	2.00
Sub Total	**29.30**	**29.90**	**29.90**	**30.80**	**29.20**	**28.00**
Strategic Goal No. 3						
Reduced Sidestream	0.50	0.60	1.00	2.00	2.00	2.00
Sub Total	**0.50**	**0.60**	**1.00**	**2.00**	**2.00**	**2.00**
Strategic Goal No. 4						
Low Tar/High Flavor	1.10	1.10	1.00	1.00	1.00	1.00
Sub Total	**1.10**	**1.10**	**1.00**	**1.00**	**1.00**	**1.00**
Strategic Goal No. 5						
International Product Support	0.10	--	--	--	--	--
Sub Total	**0.10**	--	--	--	--	--
Strategic Goal No. 6						
Combustion Research	--	--	0.50	1.00	1.00	1.50
Selective Separations	0.50	0.50	0.10	0.10	0.10	0.10
Consumer Testing Research	2.00	2.00	2.00	2.00	2.00	2.00
Biological	2.60	2.60	2.90	3.00	5.10	5.30
Sub Total	**5.10**	**5.10**	**5.50**	**6.10**	**8.20**	**8.90**
TOTAL	**53.00**	**52.00**	**53.00**	**56.00**	**57.00**	**57.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Chemical Research Division
(Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No.1						
Operations. Support	0.50	0.40	0.40	0.30	0.40	0.50
Project Tomorrow	0.20	1.00	1.00	0.50	0.20	0.20
Reduced Density Rod	0.10	--	--	--	--	--
Tamper Evident Pkg.	0.10	0.30	1.00	1.00	0.50	0.10
ART Support	0.20	0.30	0.10	--	--	--
Environmental Issues	1.00	2.00	1.00	1.00	1.00	1.00
Cast Sheet RCB	--	0.10	0.10	0.20	0.10	--
Sub Total	**2.10**	**4.10**	**3.60**	**3.00**	**2.20**	**1.80**
Strategic Goal No. 2						
Proj. ART	2.00	2.00	1.50	1.50	1.50	1.50
TSNA	1.00	1.00	1.00	1.00	1.00	1.00
LBA	1.00	1.00	1.00	1.00	1.00	1.00
Sub Total	**4.00**	**4.00**	**3.50**	**3.50**	**3.50**	**3.50**
Strategic Goal No. 3						
Reduced Sidestream	15.50	15.70	13.90	13.00	13.00	13.00
Project. Ambrosia	1.50	1.00	1.00	0.20	0.20	0.20
Sub Total	**17.00**	**16.70**	**14.90**	**13.20**	**13.20**	**13.20**
Strategic Goal No. 4						
Menthol	1.00	1.00	0.50	0.50	0.50	0.50
Low Tar/High Flavor	3.00	2.50	2.50	2.00	2.00	2.00
Filter Research	--	0.50	1.50	1.50	1.50	1.50
Sub Total	**4.00**	**4.00**	**4.50**	**4.00**	**4.00**	**4.00**
Strategic Goal No. 6						
Combustion Research	--	0.20	1.00	2.80	3.00	4.00
Flavors	2.10	1.60	3.70	4.90	5.10	5.00
Aerosols	0.30	0.10	0.30	0.10	0.50	0.50
Selective Separations	0.30	0.30	0.50	0.50	0.50	1.50
Measurements & Sensing of Physical & Chemical Characteristics	1.20	1.00	1.00	1.00	1.00	0.50
Sub Total	**3.90**	**3.20**	**6.50**	**9.30**	**10.10**	**11.50**
TOTAL	**31.00**	**32.00**	**33.00**	**33.00**	**33.00**	**34.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Physical Research Division
(Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	3.00	3.00	2.00	2.00	2.00	4.00
Project Tomorrow	2.50	2.50	4.00	5.50	4.50	2.50
Reduced Density Rod	1.00	--	--	--	--	--
Optical Processing	5.50	5.50	6.00	5.00	5.00	5.50
ART Support	2.50	1.50	1.50	1.50	1.50	1.50
Sub Total	**14.50**	**12.50**	**13.50**	**14.00**	**13.00**	**13.50**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	14.00	14.00	14.00	14.00	14.00	12.00
Project ART	1.00	1.00	1.00	1.00	1.00	1.00
Selective Filtration	0.50	1.50	1.50	1.50	1.50	1.50
Supercritical Technology	1.50	2.50	3.50	4.50	5.50	5.50
Sub Total	**17.00**	**19.00**	**20.00**	**21.00**	**22.00**	**20.50**
Strategic Goal No. 3						
None						
Strategic Goal No. 4						
Menthol	1.50	0.50	--	--	--	--
Filter Research	2.50	2.50	2.50	2.50	2.50	3.00
Sub Total	**4.00**	**3.00**	**2.50**	**2.50**	**2.50**	**3.00**
Strategic Goal No. 5						
None						
Strategic Goal No. 6						
Combustion Research	1.50	1.50	2.50	2.50	2.00	2.00
Aerosols	2.00	2.00	2.00	2.00	2.00	2.00
Selective Separations	--	--	0.50	1.00	1.50	2.00
Measurement & Sensing of Physical & Chemical Characteristics	--	1.00	1.00	1.00	1.00	1.00
Sub Total	**3.50**	**4.50**	**6.00**	**6.50**	**6.50**	**7.00**
TOTAL	**39.00**	**39.00**	**42.00**	**44.00**	**44.00**	**44.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Development Engineering Division
(Direct and Support)

		Current	1990	1991	1992	1993	1994
Strategic Goal No. 1							
Operations Support	(D)	2.70	2.50	2.50	2.50	2.50	2.50
Project Tomorrow	(S)	0.65	0.65	1.10	1.40	1.15	0.70
Reduced Density Rod	(D)	0.50	--	--	--	--	--
Optical Processing	(D)	0.20	2.50	2.00	1.00	1.00	1.00
Optical Processing	(S)	1.00	1.00	1.10	1.00	1.00	1.00
2nd Generation DIET	(D)	--	0.50	0.50	0.50	0.50	0.50
2nd Generation DIET	(S)	0.75	1.30	1.55	1.75	1.90	2.00
ART Support	(D)	2.00	2.00	0.50	0.50	--	--
Environmental Issues	(D)	1.00	1.00	1.00	1.00	1.00	1.00
Cast Sheet RCB	(D)	--	0.50	0.50	0.50	--	--
Sub Total		**8.80**	**11.95**	**10.75**	**10.15**	**9.05**	**8.70**
Strategic Goal No. 2							
Project Delta/Sigma	(D)	2.00	2.00	2.00	2.00	2.00	2.00
Project ART	(S)	3.65	2.45	2.35	2.40	2.40	2.40
Supercritical Tech.	(D)	0.10	--	--	--	--	--
Supercritical Tech.	(S)	--	0.90	1.50	1.65	2.30	2.35
Sub Total		**5.75**	**5.35**	**5.85**	**6.05**	**6.70**	**6.75**
Strategic Goal No. 3							
Reduced Sidestream	(D)	0.50	0.50	0.50	0.50	0.50	0.50
Project Ambrosia	(S)	0.85	0.55	0.50	0.20	0.15	0.15
ETS	(D)	0.20	0.25	0.25	0.25	0.25	0.25
Project PACT	(D)	2.00	2.00	2.00	1.00	1.00	1.00
Sub Total		**3.55**	**3.30**	**3.25**	**1.95**	**1.90**	**1.90**
Strategic Goal No. 4							
Menthol	(D)	0.25	0.25	0.25	0.25	0.25	0.25
Domestic Products	(S)	1.90	1.80	2.50	3.20	3.30	3.30
Filter Research	(D)	1.00	0.25	--	--	--	--
Filter Research	(S)	1.00	0.70	0.90	1.15	1.00	1.10
Sub Total		**4.15**	**3.00**	**3.65**	**4.60**	**4.55**	**4.65**
Strategic Goal No. 5							
Intn. Products	(S)	3.90	2.90	3.50	4.20	4.70	4.90
Sub Total		**3.90**	**2.90**	**3.50**	**4.20**	**4.70**	**4.90**

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Strategic Goal No. 6

Flavors	(D)	1.00	1.00	0.25	0.25	0.25	0.25
Aerosols	(S)	0.45	0.30	0.35	0.40	0.45	0.45
Consumer Testing	(S)	0.30	0.10	0.30	0.30	0.30	0.30
Computer Systems	(D)	0.10	0.10	0.10	0.10	0.10	0.10
Sub Total		**1.85**	**1.50**	**1.00**	**1.05**	**1.10**	**1.10**
TOTAL		**28.00**	**28.00**	**28.00**	**28.00**	**28.00**	**28.00**

D = Direct
S = Support

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Tobacco Fundamentals Division
(Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	1.00	3.00	2.50	--	--	--
Project Tomorrow	--	0.30	0.50	0.50	--	--
Reduced Density Rod	11.30	--	--	--	--	--
2nd Generation DIET	--	6.20	4.00	4.50	5.00	5.00
Sub Total	**12.30**	**9.50**	**7.00**	**5.00**	**5.00**	**5.00**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	2.20	2.50	3.00	4.50	4.50	4.50
Sub Total	**2.20**	**2.50**	**3.00**	**4.50**	**4.50**	**4.50**
Strategic Goal No. 3						
Project Ambrosia	--	0.50	0.50	--	--	--
Sub Total	**--**	**0.50**	**0.50**	**--**	**--**	**--**
Strategic Goal No. 4						
Menthol	0.50	1.00	1.50	2.00	2.00	2.00
Domestic Product Support	0.50	1.00	1.50	1.50	1.50	1.50
Sub Total	**1.00**	**2.00**	**3.00**	**3.50**	**3.50**	**3.50**
Strategic Goal No. 5						
International Products	0.50	1.00	1.00	1.00	1.00	1.00
Sub Total	**0.50**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**
Strategic Goal No. 6						
Flavors	--	0.50	1.50	2.00	2.00	2.00
Sub Total	**--**	**0.50**	**1.50**	**2.00**	**2.00**	**2.00**
TOTAL	**16.00**	**16.00**	**16.00**	**16.00**	**16.00**	**16.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Tobacco Materials Division
(Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No.1						
Operations Support	4.60	5.60	7.10	5.60	5.60	5.60
Reduced Density Rod	1.20	--	--	--	--	--
Project Natural	--	1.00	--	--	--	--
2nd Generation DIET	2.70	1.00	2.00	2.00	2.00	2.00
ART Support	9.30	5.30	4.30	5.30	5.50	5.50
Environmental Issues	--	1.00	1.00	1.00	1.00	1.00
Cast Sheet RCB	--	4.20	4.00	5.00	5.00	5.00
Sub Total	**17.80**	**18.10**	**18.40**	**18.90**	**19.10**	**19.10**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	0.40	0.20	0.20	0.20	0.20	0.20
Project ART	14.80	13.90	12.60	11.60	11.40	11.40
TSNA	0.10	--	0.50	--	0.50	--
LBA	0.20	0.50	--	0.50	--	0.50
Selective Filtration	--	0.30	0.30	0.80	0.80	0.80
Sub Total	**15.50**	**14.90**	**13.60**	**13.10**	**12.90**	**12.90**
Strategic Goal No. 3						
Reduced Sidestream	4.00	3.00	3.00	3.00	3.00	3.00
Project PACT	1.00	1.00	1.00	1.00	1.00	1.00
Sub Total	**5.00**	**4.00**	**4.00**	**4.00**	**4.00**	**4.00**
Strategic Goal No. 4						
Domestic Product Support	1.60	4.00	5.00	5.00	5.00	5.00
Sub Total	**1.60**	**4.00**	**5.00**	**5.00**	**5.00**	**5.00**
Strategic Goal No. 5						
TMCI BL Processing	1.10	--	--	--	--	--
Sub Total	**1.10**	--	--	--	--	--
TOTAL	**41.00**	**41.00**	**41.00**	**41.00**	**41.00**	**41.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Tobacco Processing and Fabrication
(Support)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	17.80	17.90	19.10	18.70	20.00	20.10
Project Tomorrow	0.90	1.30	2.00	2.30	1.90	1.20
Reduced Density Rod	0.90	--	--	--	--	--
Project Natural	0.50	1.30	0.50	0.40	0.40	0.40
2nd Generation DIET	0.70	1.90	2.00	2.10	2.20	2.20
ART Support	2.70	2.40	1.90	1.60	1.00	1.00
Environmental Issues	0.30	0.60	0.70	0.90	1.10	1.20
Cast Sheet RCB	--	0.70	1.00	1.00	1.00	1.00
Sub Total	**23.80**	**26.10**	**27.20**	**27.00**	**27.60**	**27.10**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	0.80	0.90	0.90	1.00	1.00	1.00
Project ART	10.80	11.20	9.30	8.80	8.60	8.50
TSNA	0.10	0.10	0.10	0.10	0.10	0.10
LBA	0.10	0.10	0.10	0.10	0.10	0.10
Sub Total	**11.80**	**12.30**	**10.40**	**10.00**	**9.80**	**9.70**
Strategic Goal No. 3						
Reduced Sidestream	2.90	3.10	2.70	2.60	2.50	2.40
Project Ambrosia	0.20	0.20	0.20	0.10	0.10	0.10
Sub Total	**3.10**	**3.30**	**2.90**	**2.70**	**2.60**	**2.50**
Strategic Goal No. 4						
Menthol	0.80	0.70	0.90	1.00	1.10	1.20
Low Tar/High Flavor	0.80	0.80	0.90	0.90	1.00	1.00
Domestic Product Support	4.70	6.50	8.00	9.10	9.10	9.20
Filter Research	0.50	0.50	0.50	0.60	0.50	0.50
Sub Total	**6.80**	**8.50**	**10.30**	**11.60**	**11.70**	**11.90**
Strategic Goal No. 5						
International Product	8.30	9.50	9.90	10.40	11.00	11.50
Filter Research	0.20	0.30	0.30	0.30	0.30	0.30
Sub Total	**8.50**	**9.80**	**10.20**	**10.70**	**11.30**	**11.80**
TOTAL	**54.00**	**60.00**	**61.00**	**62.00**	**63.00**	**63.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Product Evaluation Division
(Direct and Support)

		Current	1990	1991	1992	1993	1994
Strategic Goal No. 1							
Operations Support	(Sup)	2.30	2.10	2.45	2.90	2.90	2.75
Project Tomorrow	(Sup)	0.45	0.50	0.85	0.90	0.85	0.60
Red. Density Rod	(Sup)	0.25	--	--	--	--	--
Project Natural	(Sup)	0.25	0.25	0.25	0.20	0.20	0.20
2nd Generation DIET	(Sup)	0.20	0.50	0.55	0.45	0.45	0.45
ART Support	(Dir)	2.50	2.50	1.50	--	--	--
ART Support	(Sup)	0.35	0.25	0.25	0.25	0.25	0.20
Envrn. Issues	(Sup)	0.20	0.15	0.25	0.25	0.25	0.25
Cast Sheet RCB	(Sup)	--	0.15	0.15	0.15	0.15	0.15
Sub Total		**6.50**	**6.40**	**6.25**	**5.10**	**5.05**	**4.60**
Strategic Goal No. 2							
Project ART	(Sup)	1.40	1.20	0.55	0.55	0.35	0.20
Selective Filt.	(Sup)	0.15	0.15	0.25	0.25	0.25	0.25
Sub Total		**1.55**	**1.35**	**0.80**	**0.80**	**0.60**	**0.45**
Strategic Goal No. 3							
Reduced Sidestream	(Sup)	2.05	1.75	1.85	1.85	1.80	1.70
Project Ambrosia	(Sup)	1.10	0.90	0.75	0.40	0.30	0.20
Sub Total		**3.15**	**2.65**	**2.60**	**2.25**	**2.10**	**1.90**
Strategic Goal No. 4							
Menthol	(Sup)	0.75	0.60	1.00	1.00	1.00	1.15
Low Tar/High Flavor	(Sup)	1.90	1.85	2.00	2.20	2.20	2.20
Domestic Product	(Sup)	8.95	8.80	9.90	11.70	11.95	11.75
Filter Research	(Sup)	0.45	0.45	0.45	0.45	0.45	0.45
Sub Total		**12.05**	**11.70**	**13.35**	**15.35**	**15.60**	**15.55**
Strategic Goal No. 5							
Red. Tar & Nicotine	(Sup)	0.25	0.25	0.25	0.25	0.25	0.15
Filter Research	(Sup)	1.00	1.15	1.25	1.25	1.40	1.35
Sub Total		**1.25**	**1.40**	**1.50**	**1.50**	**1.65**	**1.50**
Strategic Goal No. 6							
Consumer Test Res.	(Dir)	2.50	3.50	3.50	4.00	4.00	5.00
Sub Total		**2.50**	**3.50**	**3.50**	**4.00**	**4.00**	**5.00**
TOTAL		**27.00**	**27.00**	**28.00**	**29.00**	**29.00**	**29.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Cigarette Technology
(Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No.1						
Operations Support	3.60	3.70	3.55	3.65	3.75	3.75
Project Tomorrow	0.35	0.55	0.75	0.75	0.75	0.75
Reduced Density Rod	0.25	--	--	--	--	--
Tamper Evident Pkg.	0.05	0.20	0.20	0.45	0.45	0.45
Cast Sheet RCB	--	0.30	0.50	0.40	0.30	0.30
Sub Total	**4.25**	**4.75**	**5.00**	**5.25**	**5.25**	**5.25**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	11.05	11.00	12.00	12.75	12.75	12.75
Project ART	0.60	0.60	--	--	--	--
Selective Filtration	0.40	0.40	0.50	0.50	0.50	0.50
Sub Total	**12.05**	**12.00**	**12.50**	**13.25**	**13.25**	**13.25**
Strategic Goal No. 3						
Reduced Sidestream	4.05	4.05	4.05	4.15	4.15	4.15
Project Ambrosia	1.55	1.00	0.50	0.15	0.15	0.15
Sub Total	**5.60**	**5.05**	**4.55**	**4.30**	**4.30**	**4.30**
Strategic Goal No. 4						
Menthol	0.95	0.30	0.30	0.30	0.30	0.30
Low Tar/High Flavor	1.50	1.50	1.25	1.25	1.00	1.00
Domestic Product Support	1.75	1.85	1.85	2.85	3.10	3.10
Filter Research	1.00	1.00	1.00	1.00	1.00	1.00
Sub Total	**5.20**	**4.65**	**4.40**	**5.40**	**5.40**	**5.40**
Strategic Goal No. 5						
International Products	1.40	1.30	1.30	1.80	2.30	2.30
Reduced Tar & Nicotine	0.50	0.50	0.50	0.50	0.50	0.50
Filter Research	3.00	3.50	3.50	3.50	4.00	4.00
Sub Total	**4.90**	**5.30**	**5.30**	**5.80**	**6.80**	**6.80**
Strategic Goal No. 6						
Flavors	0.20	0.45	0.45	0.20	0.20	0.20
Aerosols	0.30	0.30	0.30	0.30	0.30	0.30
Computer Systems	0.50	0.50	0.50	0.50	0.50	0.50
Sub Total	**1.00**	**1.25**	**1.25**	**1.00**	**1.00**	**1.00**
TOTAL	**33.00**	**33.00**	**33.00**	**35.00**	**36.00**	**36.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Flavor Development Division
Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	2.70	0.90	1.80	2.80	2.90	3.00
Project Tomorrow	--	--	0.20	0.20	0.20	--
Project Natural	0.20	0.20	0.20	--	--	--
2nd Generation DIET	0.55	1.55	1.55	1.30	1.30	1.30
ART Support	1.00	0.75	0.25	0.25	0.25	0.10
Environmental Issues	0.35	0.20	0.10	0.20	0.20	0.20
Cast Sheet RCB	--	0.70	1.10	1.00	0.90	0.90
Sub Total	**4.80**	**4.30**	**5.20**	**5.75**	**5.75**	**5.50**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	1.55	2.50	2.00	1.00	0.50	0.10
Project ART	2.60	2.00	1.00	1.00	0.50	0.10
Selective Filtration	--	--	0.20	0.20	0.20	0.20
Sub Total	**4.15**	**4.50**	**3.20**	**2.20**	**1.20**	**0.40**
Strategic Goal No. 3						
Reduced Sidestream	1.55	0.75	0.55	0.25	0.25	0.25
Project Ambrosia	0.65	0.75	0.65	0.40	0.15	--
Sub Total	**2.20**	**1.50**	**1.20**	**0.65**	**0.40**	**0.25**
Strategic Goal No. 4						
Menthol	0.80	1.00	2.00	2.00	2.35	2.60
Low Tar/High Flavor	2.15	2.00	2.35	2.85	3.25	3.25
Domestic Product Support	3.05	3.05	4.15	4.55	5.05	5.05
Filter Research	0.30	0.30	0.30	0.30	0.30	0.30
Sub Total	**6.30**	**6.35**	**8.80**	**9.70**	**10.95**	**11.20**
Strategic Goal No. 5						
International Products	2.10	1.95	2.00	3.00	4.00	4.50
TMCI BL Processing	0.05	--	--	--	--	--
Reduced Tar & Nicotine	0.20	0.20	0.20	0.20	0.20	--
Sub Total	**2.35**	**2.15**	**2.20**	**3.20**	**4.20**	**4.50**
Strategic Goal No. 6						
Flavors	2.20	2.20	2.40	2.50	2.50	3.15
Sub Total	**2.20**	**2.20**	**2.40**	**2.50**	**2.50**	**3.15**
TOTAL	**22.00**	**21.00**	**23.00**	**24.00**	**25.00**	**25.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Cigarette Development
(Direct)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	0.50	0.50	0.50	0.50	0.50	0.50
Project Tomorrow	1.00	1.50	1.50	1.50	1.50	1.00
Reduced Density Rod	0.50	--	--	--	--	--
Project Natural	0.50	0.50	0.50	0.50	0.50	0.50
ART Support	--	--	0.50	0.50	0.50	0.50
Environmental Issues	0.25	0.25	0.50	0.50	0.50	0.50
Sub Total	**2.75**	**2.75**	**3.50**	**3.50**	**3.50**	**3.00**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	--	--	0.25	0.25	0.25	0.75
Project ART	1.00	1.00	0.50	0.50	0.50	0.50
TSNA	--	--	0.25	0.25	0.25	0.25
LBA	--	--	0.25	0.25	0.25	0.25
Sub Total	**1.00**	**1.00**	**1.25**	**1.25**	**1.25**	**1.75**
Strategic Goal No. 3						
Reduced Sidestream	0.50	0.50	0.75	0.75	0.75	0.75
Project Ambrosia	1.00	1.00	1.00	0.50	0.50	0.50
Sub Total	**1.50**	**1.50**	**1.75**	**1.25**	**1.25**	**1.25**
Strategic Goal No. 4						
Menthol	0.50	0.50	0.50	0.50	0.50	0.50
Low Tar/High Flavor	2.00	2.00	2.00	2.00	2.00	2.00
Domestic Product Support	3.25	3.25	4.00	4.50	4.50	4.50
Sub Total	**5.75**	**5.75**	**6.50**	**7.00**	**7.00**	**7.00**
TOTAL	**11.00**	**11.00**	**13.00**	**13.00**	**13.00**	**13.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Administration Services Division
(Support)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	3.60	3.50	3.70	3.50	3.85	3.70
Project Tomorrow	0.35	0.40	0.65	0.80	0.65	0.40
Reduced Density Rod	1.30	--	--	--	--	--
Optical Processing	0.50	0.70	0.70	0.55	0.55	0.60
Tamper Evident Pkg.	--	0.05	0.10	0.15	0.10	0.05
Project Natural	0.05	0.10	0.05	0.05	0.05	0.05
2nd Generation DIET	0.35	0.90	0.85	0.90	0.95	0.95
ART Support	3.00	2.45	1.95	1.75	1.10	1.10
Environmental Issues	0.20	0.35	0.40	0.60	0.70	0.75
Cast Sheet RCB	--	0.55	0.65	0.75	0.65	0.65
Sub Total	**9.35**	**9.00**	**9.05**	**9.05**	**8.60**	**8.25**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	2.70	2.80	3.10	3.40	3.30	3.25
Project ART	1.80	1.65	1.40	1.40	1.35	1.30
TSNA	1.30	1.30	1.45	1.45	1.05	0.85
LBA	1.25	1.30	1.30	1.55	1.70	1.80
Selective Filtration	0.05	0.15	0.20	0.25	0.25	0.30
Supercritical Technology	0.45	0.65	0.90	0.95	1.25	1.30
Sub Total	**7.55**	**7.85**	**8.35**	**9.00**	**8.90**	**8.80**
Strategic Goal No. 3						
Reduced Sidestream	2.70	2.60	2.35	2.35	2.25	2.15
Project Ambrosia	0.40	0.40	0.30	0.10	0.10	0.05
ETS	0.30	0.50	0.50	0.45	0.20	0.20
Project PACT	0.50	0.30	0.35	0.25	0.25	0.25
Sub Total	**3.90**	**3.80**	**3.50**	**3.15**	**2.80**	**2.65**
Strategic Goal No. 4						
Menthol	0.45	0.35	0.50	0.55	0.60	0.60
Low Tar/High Flavor	0.80	0.70	0.85	0.90	0.95	0.95
Domestic Product Support	0.95	1.15	1.50	1.90	1.80	1.80
Filter Research	0.50	0.45	0.55	0.65	0.55	0.60
Sub Total	**2.70**	**2.65**	**3.40**	**4.00**	**3.90**	**3.95**
Strategic Goal No. 5						
Intn. Product Support	2.00	2.00	2.15	2.40	2.55	2.65
TMCI BL Processing Dev.	0.10	--	--	--	--	--
Reduced Tar & Nicotine	0.05	0.05	0.05	0.05	0.05	0.05
Filter Research	0.25	0.30	0.30	0.30	0.35	0.35
Sub Total	**2.40**	**2.35**	**2.50**	**2.75**	**2.95**	**3.05**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Strategic Goal No. 6

Combustion Research	0.15	0.15	0.35	0.55	0.55	0.65
Flavors	0.50	0.55	0.95	1.20	1.30	1.35
Aerosols	0.20	0.20	0.20	0.20	0.25	0.25
Selective Separations	0.15	0.25	0.25	0.40	0.55	0.60
Consumer Testing Research	0.35	0.40	0.45	0.50	0.50	0.60
Measurement & Sensing of Physical & Chemical Characteristics	0.15	0.20	0.25	0.35	0.55	0.40
Biological	0.30	0.30	0.40	0.45	0.60	0.70
Computing Systems	0.30	0.30	0.35	0.40	0.40	0.40
Basic Analytical Research	--	--	--	--	0.15	0.35
Sub Total	**2.10**	**2.35**	**3.20**	**4.05**	**4.85**	**5.30**
TOTAL	**28.00**	**28.00**	**30.00**	**32.00**	**32.00**	**32.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Cigarette Testing Division
(Support)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	5.50	6.00	6.40	6.20	6.60	6.50
Project Tomorrow	1.00	1.00	1.50	1.70	1.40	1.00
Reduced Density Rod	0.50	--	--	--	--	--
Project Natural	0.50	0.50	0.40	0.30	0.30	0.30
2nd Generation DIET	0.50	0.50	1.00	1.00	1.80	1.80
ART Support	3.00	3.00	2.40	2.00	1.20	1.20
Cast Sheet RCB	--	0.30	0.50	0.40	0.30	0.30
Sub Total	**11.00**	**11.30**	**12.20**	**11.60**	**11.60**	**11.10**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	1.00	1.00	1.00	1.00	1.00	1.00
Project ART	0.50	0.50	0.50	0.50	0.50	0.50
Sub Total	**1.50**	**1.50**	**1.50**	**1.50**	**1.50**	**1.50**
Strategic Goal No. 3						
Reduced Sidestream	0.50	0.50	0.50	0.50	0.50	0.50
Project Ambrosia	1.00	1.00	1.00	0.50	0.40	0.30
Sub Total	**1.50**	**1.50**	**1.50**	**1.00**	**0.90**	**0.80**
Strategic Goal No. 4						
Menthol	3.00	3.00	3.00	3.20	3.40	3.50
Low Tar/High Flavor	2.00	2.00	2.20	2.20	2.40	2.40
Domestic Product Support	14.00	14.20	14.90	16.10	16.70	16.70
Filter Research	3.00	3.00	3.20	3.50	3.00	3.20
Sub Total	**22.00**	**22.20**	**23.30**	**25.00**	**25.50**	**25.80**
Strategic Goal No. 5						
Int. Product Support	0.50	--	--	0.40	0.90	1.20
Reduced Tar & Nicotine	1.00	1.00	1.00	1.00	1.00	1.00
Filter Research	0.50	0.50	0.50	0.50	0.60	0.60
Sub Total	**2.00**	**1.50**	**1.50**	**1.90**	**2.50**	**2.80**
TOTAL	**38.00**	**38.00**	**40.00**	**41.00**	**42.00**	**42.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Computer Applications Division
(Direct and Support)

		Current	1990	1991	1992	1993	1994
Strategic Goal No. 1							
Operations Support	(S)	3.85	3.60	3.70	3.50	3.85	3.70
Project Tomorrow	(D)	0.10	0.10	0.10	0.10	0.10	0.10
Project Tomorrow	(S)	0.35	0.45	0.65	0.80	0.65	0.40
Reduced Density Rod	(S)	1.35	--	--	--	--	--
Optical Processing	(S)	0.50	0.70	0.70	0.55	0.55	0.60
Tamper Evident Pkg.	(S)	--	0.05	0.10	0.15	0.10	0.05
Project Natural	(S)	0.05	0.10	0.05	0.05	0.05	0.05
2nd Generation DIET	(S)	0.40	1.00	0.95	0.90	0.95	0.95
ART Support	(S)	3.15	2.55	2.05	1.75	1.10	1.10
Environmental Issues	(S)	0.25	0.40	0.45	0.60	0.70	0.75
Cast Sheet RCB	(S)	--	0.65	0.70	0.75	0.65	0.65
Sub Total		**10.00**	**9.60**	**9.45**	**9.15**	**8.70**	**8.35**
Strategic Goal No. 2							
Project Delta/Sigma	(S)	2.75	2.90	3.20	3.40	3.30	3.25
Project ART	(S)	1.90	1.75	1.45	1.40	1.35	1.30
TSNA	(S)	1.40	1.40	1.50	1.45	1.05	0.85
LBA	(S)	1.30	1.35	1.35	1.55	1.70	1.80
Selective Filtration	(S)	0.10	0.15	0.20	0.25	0.25	0.30
Supercritical Tech.	(S)	0.50	0.70	0.95	0.95	1.25	1.30
Sub Total		**7.95**	**8.25**	**8.65**	**9.00**	**8.90**	**8.80**
Strategic Goal No. 3							
Reduced Sidestream	(D)	0.30	0.30	0.30	0.30	0.30	0.30
Reduced Sidestream	(S)	2.85	2.75	2.45	2.35	2.25	2.15
Project Ambrosia	(S)	0.45	0.45	0.30	0.10	0.10	0.05
ETS	(S)	0.30	0.55	0.55	0.45	0.20	0.20
Project PACT	(S)	0.55	0.30	0.35	0.25	0.25	0.25
Sub Total		**4.45**	**4.35**	**3.95**	**3.45**	**3.10**	**2.95**
Strategic Goal No. 4							
Menthol	(S)	0.50	0.40	0.55	0.55	0.60	0.60
Low Tar/High Flavor	(S)	0.85	0.75	0.90	0.90	0.95	0.95
Domestic Products	(S)	1.00	1.25	1.60	1.90	1.80	1.80
Filter Research	(D)	0.30	0.30	0.10	0.10	0.10	0.05
Filter Research	(S)	0.50	0.50	0.55	0.65	0.55	0.65
Sub Total		**3.15**	**3.20**	**3.70**	**4.10**	**4.00**	**4.05**
Strategic Goal No. 5							
Intn. Products	(S)	2.10	2.10	2.20	2.40	2.55	2.65
TMCI BL Processing	(S)	0.10	--	--	--	--	--
Red. Tar & Nicotine	(S)	0.05	0.05	0.05	0.05	0.05	0.05
Filter Research	(S)	0.25	0.30	0.30	0.30	0.35	0.35
Sub Total		**2.50**	**2.45**	**2.55**	**2.75**	**2.95**	**3.05**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Strategic Goal No. 6

Combustion Research	(S)	0.15	0.15	0.35	0.55	0.55	0.65
Flavors	(S)	0.55	0.60	1.00	1.20	1.30	1.35
Aerosols	(S)	0.25	0.20	0.25	0.20	0.25	0.25
Selective Separation	(S)	0.15	0.25	0.30	0.40	0.55	0.60
Consumer Test. Res.	(S)	0.40	0.45	0.50	0.50	0.50	0.60
Measurment & Sensing Physical & Chemical Characteristics	(S)	0.15	0.20	0.25	0.35	0.55	0.40
Biological	(S)	0.30	0.30	0.40	0.45	0.60	0.70
Computer Systems	(D)	2.70	2.70	3.30	3.50	3.50	3.50
Computer Systems	(S)	0.30	0.30	0.35	0.40	0.40	0.40
Basic Analytic Res.	(S)	--	--	--	--	0.15	0.35
Sub Total		**4.95**	**5.15**	**6.70**	**7.55**	**8.35**	**8.80**
TOTAL		**33.00**	**33.00**	**35.00**	**36.00**	**36.00**	**36.00**

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Source: https://www.industrydocuments.ucsf.edu/docs/xspk0000

Technical Information Section
(Support)

	Current	1990	1991	1992	1993	1994
Strategic Goal No. 1						
Operations Support	1.40	1.30	1.30	1.30	1.40	1.40
Project Tomorrow	0.10	0.20	0.25	0.30	0.25	0.15
Reduced Density Rod	0.55	--	--	--	--	--
Optical Processing	0.20	0.25	0.25	0.20	0.20	0.25
Tamper Evident Pkg.	--	--	0.05	0.05	0.05	--
Project Natural	--	0.05	0.05	--	--	--
2nd Generation DIET	0.15	0.35	0.25	0.35	0.35	0.35
ART Support	1.25	1.00	0.75	0.65	0.40	0.40
Environmental Issues	0.10	0.15	0.15	0.20	0.30	0.30
Cast Sheet RCB	--	0.20	0.25	0.25	0.25	0.25
Sub Total	**3.75**	**3.50**	**3.30**	**3.30**	**3.20**	**3.10**
Strategic Goal No. 2						
Project Delta/Sigma/Beta	1.10	1.10	1.10	1.25	1.25	1.20
Project ART	0.70	0.70	0.50	0.50	0.50	0.50
TSNA	0.50	0.50	0.50	0.55	0.40	0.30
LBA	0.50	0.55	0.55	0.60	0.65	0.65
Selective Filtration	0.05	0.05	0.10	0.10	0.10	0.10
Supercritical Technology	0.15	0.25	0.35	0.35	0.45	0.50
Sub Total	**3.00**	**3.15**	**3.10**	**3.35**	**3.35**	**3.25**
Strategic Goal No. 3						
Reduced Sidestream	1.05	1.00	0.85	0.95	0.85	0.85
Project Ambrosia	0.15	0.15	0.10	0.05	0.05	0.05
ETS	0.10	0.20	0.20	0.20	0.05	0.05
Project PACT	0.20	0.10	0.10	0.10	0.10	0.10
Sub Total	**1.50**	**1.45**	**1.25**	**1.30**	**1.05**	**1.05**
Strategic Goal No.4						
Menthol	0.20	0.15	0.15	0.20	0.20	0.25
Low Tar/High Flavor	0.30	0.30	0.30	0.35	0.35	0.35
Domestic Product Support	0.35	0.45	0.55	0.70	0.70	0.65
Filter Research	0.20	0.20	0.20	0.25	0.20	0.20
Sub Total	**1.05**	**1.10**	**1.20**	**1.50**	**1.45**	**1.45**
Strategic Goal No. 5						
International Product Support	0.75	0.80	0.80	0.90	0.95	1.00
TMCI BL Processing	0.05	--	--	--	--	--
Filter Research	0.10	0.10	0.10	0.10	0.15	0.15
Sub Total	**0.90**	**0.90**	**0.90**	**1.00**	**1.10**	**1.15**

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Strategic Goal No. 6

Combustion Research	0.05	0.05	0.15	0.20	0.20	0.25
Flavors	0.20	0.20	0.35	0.45	0.50	0.50
Aerosols	0.10	0.10	0.10	0.10	0.10	0.10
Selective Separations	0.05	0.10	0.10	0.15	0.20	0.20
Consumer Test. Res.	0.15	0.15	0.15	0.20	0.20	0.25
Measurements & Sensing	0.05	0.10	0.10	0.15	0.20	0.20
Biological	0.10	0.10	0.15	0.15	0.25	0.25
Computer Systems	0.10	0.10	0.15	0.15	0.15	0.15
Basic Analytical Research	--	--	--	--	0.05	0.10
Sub Total	**0.80**	**0.90**	**1.25**	**1.55**	**1.85**	**2.00**
TOTAL	**11.00**	**11.00**	**11.00**	**12.00**	**12.00**	**12.00**

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